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R. ELLIS, B.D.

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PERUVIA SCYTHICA.

THE

QUICHUA LANGUAGE OF PERU:

ITS

DERIVATION FROM CENTRAL ASIA WITH THE AMERICAN LANGUAGES IN GENERAL, AND WITH THE TURANIAN AND IBERIAN LANGUAGES OF THE OLD WORLD,

INCLUDING

THE BASQUE, THE LYCIAN, AND THE PRE-ARYAN LANGUAGE OF ETRURIA.

BY

ROBERT ELLIS, B.D.,

AUTHOR OF "THE ASIATIC AFFINITIES OF THE OLD ITALIANS", AND LATE FELLOW OF ST. JOHN'S COLLEGE, CAMBRIDGE.

Let observation, with extensive view,
Survey mankind from China to Peru.

JOHNSON.

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PREFACE.

THE following pages, though complete in themselves, or intended to be so, are yet a further development of two previous essays of mine that will frequently be referred to in them:—*The Asiatic Affinities of the Old Italians*, published in 1870; and *Numerals as Signs of Primeval Unity among Mankind*, published in 1873. A supplementary portion at the end of the first of these volumes led to the second; and the second has now led to a third, in which some additional light may be thrown back upon the chief subject of investigation in the first,—the Etruscan language. This is a question to which attention has been recently drawn among us by the treatises of Lord Crawford and Mr. Isaac Taylor, which have been succeeded, in Germany, by the elaborate, though as yet unfinished, production of Corssen; so that I have been induced, in my last chapter, to re-state and re-examine, at greater length than I should otherwise have done in what is only a subordinate part of the present enquiry, those marks of linguistic affinity, presented to us by the monuments of Etruria, which seem decisive in my eyes.

My own theory on the question, it will be seen, remains substantially unaltered; and any modification or addition that it may now receive separates me still more widely than before from those who have lately devoted themselves to the solution of this problem. For it is not in Siberia, nor in Germany, nor yet in Italy beyond the Tiber, that I can recognise any language of the same family as the Etruscan, or as either of its two, if not three, component parts; but rather in Armenia, in the Caucasus and the Pyrenees, and—what I should hardly have suspected till I discerned Ethiopian affinities in the Basque—in Trans-Saharic Africa. The Etruscans, in short, I believe to have been *Thraciberians*, if I may be allowed to coin a word after the model of *Celtiberians*. They were a Thracian, and therefore an Aryan, graft upon an Iberian stock; the Iberians of Etruria, moreover, like the Iberians of Spain, having their language deeply tinged with an African hue, which may have been derived from the predecessors of the Iberians in the South of Europe, if it were not the common inheritance of both Iberians and Africans from their primeval ancestors.

It is through these, its Pre-Aryan inhabitants, that Etruria would be connected with Peru and the rest of the New World, as it was before the era of Columbus. For I consider the Iberians, with the Turanians and the Americans, as branches of one race, for which I have adopted Rask's title of 'Scythian'. It is possible that a better division than this tripartite one might be suggested

for the Scythian race, seeing that some Turanians are perhaps as nearly connected with some Iberians, if not even with some Americans, as they are with some other Turanians: for the Turanians of Southern Asia, with the Accadians, or Pre-Semitic Assyrians, exhibit certain peculiar marks of linguistic affinity to the Iberians, and especially to the Lycians, as they do likewise to the South Americans; thus favouring a hypothetical division of the Scythian race into Northern and Southern.[1] But such a question as this I must now leave undetermined, as well as another of much importance which awaits an answer; namely, the exact degree of affinity which unites the Scythians with the Africans. On this subject, however, and on the characteristics of the African languages, and of the Ancient Egyptian, we may confidently expect to know far more, when we possess the completion of Reinisch's great work, the fruit of fifty years' labour, upon the original unity of the languages of the Old World. What advantages I have derived from his first volume alone, may be perceived by anyone who may accompany me through the present investigation.

The primeval affinity of the languages of Africa to those of Europe and Asia has likewise been recognised by Europaeus, in his *Stammverwandschaft der meisten Sprachen der alten Welt* (St. Petersburg, 1870). Here, in his *Zahlwörtertabelle*, he unites the Basque in one group with the African and the Semitic languages, making the

[1] Compare Mr. Hyde Clarke, in the *Journal of the Society of Arts*, May 8th, 1874, p. 588.

Caucasian languages to form a second branch, and the Aryan and Finnish languages a third branch, of a common primitive tongue with other branches besides. This classification of the Basque, which only partly agrees with my own, has, however, as the reader of these pages will find, many points in its favour that are there adduced, and is to be estimated in especial connection with the African analogies presented by Etruscan numerals. But how far these, and other analogies between Iberian and African languages, are to be explained by intermixture, and how far by original affinity, remains a question for future decision, and one which I leave open when I speak of the Pre-Aryan population of Southern Europe as *Ibero-African.* Much that is collateral must be so left in a field of research which cannot be contracted within narrower limits than those of our whole earth, if its own special subject is to be viewed from all sides. It may be sufficient to have shown, in these prefatory remarks, how this third publication of mine bears, with the second, upon the first—how a work relating to the Peruvians includes in its scope the Basques, the Lycians, and the Etruscans. Some details of the evidence which I put forth five years ago concerning these last three nations, I have now been able to improve by extension and correction, and thus to afford, as I trust, additional confirmation of the views which that evidence was intended to support.

Of the following characters, which I have found it necessary or advisable to employ, *ć*, *ǵ* and *g̈́*, *ż* and *z̈*, *ẓ*, and *ź*, correspond nearly in sound, respectively, to the English *ch*, *j*, *ts*, *ds*, and *s* in such a word as *measure*: *ṭ* corresponds usually to the Welsh *ll*, or the Polish *ł*; and *ñ* to the English *ng*, but in Quichua to the Italian *gn*.

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ERRATA.

Page 12, line 18, for *ispeske*, read *ispeshe*.

„ 19, „ 23, for *sidi*, read *side*.

„ 20, „ 15, for Khond, read Kuri.

„ 26, „ 16, for *sidi*, read *side*.

„ 37, „ 6, for *quinoui-ai-quaćoibo*, read *quinoui-quaćoibo*.

„ 55, „ 9, for Coretu, read Curetu.

„ 60, „ 10, for Curetu, read Coretu.

„ 62, „ 4, for Accadian, read Egyptian.

„ 140, „ 6, for Sandoro, read Landoro.

PERUVIA SCYTHICA.

CHAPTER I.

INTRODUCTION.—THE INHABITANTS OF THE NEW WORLD, PRIOR TO ITS DISCOVERY FROM EUROPE, ARE TO BE CONSIDERED AS ONE RACE OF MEN.—THEY PASSED INTO AMERICA FROM NORTH-EASTERN ASIA.

THE Quichua language, which forms the principal subject of the present work, is spoken over a large part of the modern states of Ecuador, Peru, Bolivia, and the Argentine Republic; and it extends from the Equator to the thirtieth degree of South Latitude. The race that employs it is the most numerous and important of the South American nations, and on this account alone, if on no other, worthy of our attention: but the Quichuas and their language have a yet stronger attraction for us, as being derived from the ancient Peruvians, who rose under their Incas to be the representatives of South American civilisation. The story of the destruction of their empire and of their political existence is known to all from the narratives of the two great historians, Prescott and Robertson; but who the Peruvians were, or what bond of blood or speech may link them to other races, has long been a subject for speculation and inquiry. Such an inquiry has lately been made and answered in South America itself by the interesting work of Lopez, *Les Races Aryennes du Pérou*—a work which, as its title indicates, would connect the ancient Peruvians with our own remote Aryan forefathers. Much of the evidence which is there brought forward in support of that conclu-

sion I believe to be as pertinent as it is original; but the conclusion itself is only partially in accordance with the result that I should draw from the researches which I have brought to bear upon the work of Lopez; and this, even when his conclusion is stated with his own important modification, as it is by himself in the following passage from his work (p. 20)—a passage which I give at length, as it contains the complete embodiment of his theory :—

"Quand je dis du quichua que c'est une langue arienne, je ne voudrais pas que l'on exagérât par trop la portée et le sens de mes paroles. Je n'ai nullement la prétention de soutenir que l'on doive retrouver dans ses formes secondaires toutes les formes correspondantes du sanscrit, du zend et des idiomes congénères. Le système grammatical du quichua diffère beaucoup du système grammatical des langues que l'on a seules jusqu'à présent appelées ariennes. Sa declinaison contient, il est vrai, de véritables flexions qui présentent une analogie radicale avec les flexions ariennes; mais, le plus souvent, il offre tous les caractères d'une langue agglutinante; il semble donc que je devrais le placer dans la famille touranienne plutôt que dans la famille arienne, et le rapprocher du turc, du thibétain, du tamoul, plutôt que du sanscrit, du grec et de l'allemand. Mais si, après avoir fait l'étude des formes grammaticales, on passe à l'étude des racines qui ont constitué et les mots et les formes elles-mêmes, on est bientôt forcé de reconnaître que toutes ces racines se retrouvent avec le même sens, les mêmes fonctions et les mêmes dérivations que dans les langues ariennes et principalement dans le rameau pélasgique.[1] Le quichua appartient donc primitivement à la même famille que ces langues ariennes; mais, en même temps, pour expliquer les divergences capitales que présente sa

[1] 'Pélasgique' is here employed as equivalent to 'Classic' or 'Greco-Latin'. For myself, I consider the Pelasgians to belong, not to the Aryan, but to the Iberian stock.

constitution grammaticale, il faut ajouter qu'il a dû se séparer de la langue mère à une époque où cette langue ne se servait pas encore d'un système accompli de flexions et cherchait sa forme définitive : pour tout dire en deux mots, *le quichua est une langue arienne agglutinante.*"

This last word, *agglutinante*, gives the term, *arienne*, which it qualifies, a much more expansive sense than that in which 'Aryan' has hitherto been commonly employed; seeing that every recognised Aryan language is not agglutinative, but inflecting. And, although I do not doubt that the primitive Aryan language, from which all Aryan tongues have proceeded, was itself derived from some agglutinative language, as I believe that all inflecting languages must have been; yet this is not the same thing as to admit that we may define as 'Aryan' that particular agglutinative language, of which one dialect assumed an inflecting form from the lips of the first Aryan family: for such a definition may involve an anachronism similar to what would be committed in speaking of the Plantagenets as Yorkists or as Lancastrians, or even as Tudors or as Stuarts. I am quite ready to grant that the Aryans were akin to the Peruvians; but I am not ready to grant that the Aryans were their next of kin. The American nations, considered as a whole, and the Iberian and Turanian nations, especially the Turanians on the shores of the Pacific opposite to Peru, must, I think, stand before the Aryans in this respect.

That the nations of both Americas are to be considered as constituting a special class of their own, both physically and in language, and that consequently no one nation, such as the Quichua, can be detached from the rest, is the opinion which the best judges have generally arrived at. Martius, in his *Ethnographie Amerika's* (p. 159), a work to which my obligations are manifold, strongly supports "*die Solidarität* der Amerikanischen Menschheit in beiden Hälften des grossen Welttheils": nor does there

seem, upon this question, to be any reason for altering or qualifying the following careful and judicious statements of Dr. Prichard, in his *Natural History of Man* (ed. Norris, p. 494):—

"The American nations, taken in the aggregate, are neither among themselves so uniform and unvaried in their physical and moral qualities, nor is the line of distinction between them and the rest of mankind so strongly marked and so obvious, as most persons imagine. Yet it must be admitted that certain characters are discoverable which are common, or nearly so, to the whole of this department of nations; that there are strong indications, if not proofs, of a community of origin, or of very ancient relationship, among them; and that in surveying collectively the people of the New World, we contemplate human nature under a peculiar aspect. On comparing the American tribes together, we find reason to believe that they must have subsisted as a separate department of nations from the earliest ages of the world. Hence, in attempting to trace relations between them and the rest of mankind, we cannot expect to discover proofs of their derivation from any particular tribe or nation in the Old Continent. The era of their existence as a distinct and insulated race must probably be dated as far back as that time which separated into nations the inhabitants of the Old World, and gave to each branch of the human family its primitive language and individuality."

In support of the theory of the unity of all the American languages, Dr. Prichard first cites the weighty testimony of A. von Humboldt, and finally sums up thus (p. 496), from Gallatin:—

"Amidst that great diversity of American languages, considered only in reference to their vocabularies, the similarity of their structure and grammatical forms has been observed and pointed out by the American philologists. The result appears to confirm the opinions already enter-

tained on that subject by Mr. Du Ponceau, Mr. Pickering, and others, and to prove that all the languages, not only of our own Indians, but of the native inhabitants of America, from the Arctic Ocean to Cape Horn, have, as far as they have been investigated, a distinct character common to all, and apparently differing from any of those of the other continent with which we are most familiar."

In this opinion of the fundamental unity of all the American languages Dr. Latham coincides, and considers that the ordinal value of the American class of languages, when tested by the difference between its extreme members, such as the Esquimaux and the Fuegian, is "very moderate"; not higher, indeed, on the whole, "than that of the so-called Indo-European (or Aryan) in its most restricted form" (*Comparative Philology*, p. 522). If this estimate be true, or approximately true—and I am not inclined to dispute it—then, when the ancestors of the Aryans formed a single tribe or family in Mount Imaus, the ancestors of the Americans may have been, like them, limited in number, and confined to some region of small extent in the Old World. With regard to the Quichuas, and the family of men to which they belong, namely, the American family, four questions may thus arise for solution:—

1. By what route did the Americans pass from the Old World into the New?

2. To which of the races of the Old World are the Americans most nearly allied?

3. In what part of the Old World was, most probably, the primitive seat of the ancestors of the Americans as a distinct race?

4. In what part of America are the nearest kindred of the Quichuas to be sought: or, in other words, who appear to stand to them in a relationship at all resembling that of the Germans to the English, or the Welsh to the Irish?

The object of the following pages is to make some steps

towards the solution of these questions, by comparing the Quichua language with the languages of America and the rest of the world. The scantiness of materials, however, in the greater part of those languages, renders it necessary that the range of comparison should be limited. For the languages of uncivilised nations, with rare exceptions, are presented to us so meagrely, while other languages, such as the Aryan and Semitic, for example, are presented to us so fully, that their respective claims to relationship with any other language could not be fairly judged, unless the competition were confined to points in which all could compete alike, and where the comparison was therefore limited to the commonest characteristic features of a language. Grammar, numerals, and personal pronouns, with some score or two of familiar words, will be our best and fairest guides to the perception of affinity, when comparing together languages from one end of the world to the other.

Numerals alone, without any other aid, seem sufficient to resolve the first of our four questions:—"By what route did the Americans pass from the Old World into the New?" —a question, however, about which there is probably no great doubt, as, if the Americans migrated from Asia, they would have to reach the New World either by way of Polynesia or of North-Eastern Asia; and few would hesitate to adopt for them the latter course, whichever of the lines into which it divides they might be disposed to choose. These lines are four in number:—(1) The line from Siberia by Behring's Straits; (2) The line from Siberia by Kamtshatka and the Aleutian Islands; and (3) The line from Korea and Japan, or else (4) from Mantshuria and Sagaleen, to the Kurile Islands, and so by Kamtshatka and the Aleutian Islands into Alashka. Probabilities seem in favour of the Aleutian Islands, rather than Behring's Straits, as the route taken by the majority at least of the ancestors of the Americans (Latham, p. 384).

The evidence of language seems strongly in favour of the theory, which geographical considerations alone would render probable, that America was peopled from North-Eastern Asia, where the two continents closely approach one another. In confirmation of this, it may be sufficient if I trace three words from the extreme west of the Old World into North America; each word being employed as 'five', either actually or in the composition of other numerals, and also possessing its earlier sense of 'hand', or else of some limb of the human body. I have, accordingly, in my publication on *Numerals as Signs of Primeval Unity among Mankind*, spoken of such words as these as *hand-fives*, and defined the three in question as the *t-n hand-five* (which prevails as 'five' over half Africa), the *q-q hand-five* (of which the Latin *quinque* and other Aryan 'fives' are examples), and the *s hand-five* (which is found in Aryan 'sixes' and 'sevens', such as the Zend kh-*svas*, 'one-five', and the Sanskrit *sap*-tan, 'five-two'). As I must here repeat myself, I will do it as briefly as the argument will permit, referring any one who may care for fuller evidence on the subject to the work cited.

The first *hand-five* which I shall trace into America is the *t-n hand-five* :—

EUROPE.

Basque . . . . *zango*, 'leg, foot'.[1]

AFRICA.

Mandingo *tañ*, 'ten'.
Congo *tanu*, 'five'. *tañgu*, 'computation'.[2]

[1] Van Eys considers this word not to be of Basque origin, and compares the Italian *zanca*, 'leg, *shank*'.

[2] Bleek, *Grammar of South African Languages*, p. 227: when accompanied by its prefix of the singular number, *lu*, the word is *lu-tañgu*. Kindred words in the same list may be:—mu-*sañgu* and lu-*sañgu*, 'tribute'; mu-*tañgi* and ki-*tañga*, 'teacher'; ku-*tañga*, 'reading'; ki-*tañgilu*, 'manner of teaching, *counting*, reading'.

AFRICA.

Marawi	*sanu*, 'five'.	*żangá*, 'hand'.
Nika	*żano*, 'five'.	
Dsuku	*żoana*, 'five'.	
Okuloma	*sono*, 'five'.	
Ndob	*san*, 'five'.	
Darfur		*doñga*, 'hand'.
Cameroon		*tañga*, 'foot'.

ASIA AND AUSTRALIA.

Malay		*tanga*, 'hand'.
		tong, 'hand'.
(Timbora)		*taintu*, 'hand'.
Australia		*tona*, 'foot'.
		tina, 'foot'.
Siamese		*tin*, 'foot'.
Korean		*sun*, 'hand'.
Tungusian	*sungá*, 'five'.	
	tunga, 'five'.	
	tonga, 'five'.	
Kamtshatkan-	*tono*, 'five'.	*tono*, 'hand'.

AMERICA.

Ugalents (Alashka)	*żoane*, 'five'.
Chinook (Oregon)	*sunu-*, 'five'.

The *q-q hand-five* may also be traced across the Old World into America, in the same manner as the *t-n hand-five* has just been traced, but along a more internal though less continuous line:—

AFRICA.

Bola	*kanyen*, 'five'.	*kañyen*, 'arm'.
Mose		*kañga*, 'arm'.
Mbamba		*keñkai*, 'inner hand'.

ASIA.

Armenian	*hing*, 'five'.	
Burmese	*khwan*-, 'five'.	
	khun-, 'five'.	
Chinese	*khün*, 'fist'.	
	ćañ, 'inner hand'.	
	fuñ, 'to take in the hands'.	
	kwañ, 'arm'.	
Pwo-karen	*kañ*, 'foot'.	
Tibetan	*kañgo*, 'foot'.	

ALEUTIAN ISLANDS.

Unalashkan	*khaan*, 'five'.	*khianh*, 'hand'.

AMERICA.

Kuskutshe-wak(Alashka)	*-khvanam*, 'five'.	
Chinook (Oregon)	*kwanam*, 'five'.	
Uchee(Florida)	*ćwanhah*, 'five'.	*keanthah*, 'hand'.
		coonpah, 'fingers'.
Iquito (Ecuador	. . . .	*quiainoi*, 'foot'.[1]
Patagonian	. . . .	*fan*, 'hand'.
Catoquina (Brazil)	. . . .	*pañ*, 'arm'.

The line of the third, or *s hand-five*, across the earth, is more continuous than the previous line, and may be thus traced from Africa and Spain, where it assumes such forms as *shish*, *sed*, and *zaz*, up to the Natchez *ispeshe*, 'hand', and *shpedee*, 'five', which are completer forms of the primitive word :—

[1] It should be borne in mind, here and throughout, that in Spanish orthography *qui* and *que* = *ki* and *ke*.

Libyan and Semitic.

Kandin (S. Sahara) } *shish*-es, 'six', 5+1.
Berber *sed*-is, 'six'.
Abyssinian *sed*-ist, 'six'.
soo-s, 'six'.
Hebrew *shê*-sh, 'six'.
she-ba', 'seven', 5+2.
Coptic *soo*-u (or *soou*), 'six'.
sash-p, 'seven'.

Iberian.

Basque *se*-i, 'six'.
zaz-pi, 'seven'. *esku*, 'hand'.
Suanian . . . . *shi*, 'hand'.
Circassian *shu*, 'six'.
Georgian *shvi*-di, 'seven', 5+2.
Abkhasian bi-*sh*, 'seven', 2+5.[1]
shva, 'ten'. *shepeh*, 'foot'.

Aryan.

Gaelic *sè*, 'six'.
seach-d, 'seven'. *spàg*, 'paw'.
Afghan *shpaź*, 'six'. *sapaq*, 'hand's [breadth.'
Ossetic ach-*saz*, 'six', 1+5.
Zend kh-*svas*, 'six'.
Sanskrit *shash*, 'six'.
sap-tan, 'seven'.

S. and E. Asia.

Tonkin *tap*, 'ten'.
Cambodia *dap*, 'ten'.
Uraon . . . . *dappe*, 'foot'.
Thochu . . . . *ǵipah*, 'foot'.
Limbu *ǵip*, 'ten'.

[1] In Abkhasian numerals, here and elsewhere, the suffix *-ba* is omitted.

S. AND E. ASIA.

Siamese *sip*, 'ten'.

Chinese *shap*, 'ten'.
shih, 'ten'.[1]
shau, 'hand'.
siah, 'sandal'.
sáp, 'sandal'.

Kurile *ahsik*, 'five'.

AMERICA.

Cree (Algonkin)	negoto *ahsik*, 'six', 1+5.	
	nikootw-*asik*, 'six', 1+5.	
	nesoo-*asik*, 'seven', 2+5.	
	nesoo-*sap*, 'twelve', 2+10.	
Mohikan (Algonkin)	. . . .	*ussutin*, 'foot (my)'.
Quichua (Peru)	*sok*-ta, 'six'.	*usuta*, 'shoe'.
Cayowa (Brazil)	. . . .	*sipaa*, 'hand'.
Vilela (Bolivia)	. . . .	*isip*, 'hand'.
Hueco (Texas)	*ishquitz*, 'five'.	*ishkte*, 'hands'.
		osset, 'moccasins'.
Caddo (Louisiana)	bis-*sickka*, 'seven'.	
Ruslen (California)	hali-*shakem*, 'six'.	
Dahcota (Sioux)	*zapetah*, 'five'.	*shake*, 'fingers'.
	shah-pai, 'six'.	
	shah-ko, 'seven'.	
Pawnee	*sheeooksh*, 'five'.	*ashoo*, 'foot'.
	sheek-*shabish*, 'six'.	*haspeet*, 'fingers'.
Natchez	*shpedee*, 'five'.	*ispeshe*, 'hand'.
Catawba	. . . .	*eeksapeeah*, 'hand'.
Huasteca (Yucatan)	. . . .	*iczitl*, 'foot'.

[1] *Shap* and *shih* mean 'to collect with the *hand*', as well as 'ten'.

Though these three *hand-fives*, as has now been shown, can thus be traced from the Atlantic across the Old World into America, yet it need scarcely be said that their existence in America is not to be explained by the supposition of a migration from Europe or Africa, through Asia, into America; but rather by the theory of the radiation of mankind from some point nearly in the centre of the Old World. Again, the perfect manner in which the three *hand-fives*, but especially the two last, are preserved in America, would go far to confirm the previously quoted opinion of Dr. Prichard, that the Americans probably date the era of their existence as a distinct race as far back as that time which separated into nations the inhabitants of the Old World, and are not to be derived from any particular tribe or nation now existing there. The Natchez, for instance, with the other Americans, are not to be derived from the Aryans, any more than from the Libyans, in virtue of the coincidences in p. 10; although the Natchez *ispeske*, 'hand', and *shpedee*, 'five', with other American words, may be recognised in the Gaelic *spàg*, 'paw', and the Afghan *sapaq*, 'a hand's breadth', as well as in the Zend kh-*svas* and the Afghan *shpaź*, 'six'. Such coincidences prove no more than that the Libyans, the Aryans, and the Americans had a common ancestry. The final inference to be drawn here from the three *hand-fives*, just traced, seems to be, that the forefathers of the Americans, when they did cross the sea from Asia, entered America on the north-west. At any rate, none of the three *hand-fives* in question appears to occur in Polynesia; nor is the affinity which exists between America and Polynesia in some other numerals such as to render it likely that America was peopled from Polynesia, although it is possible that a few Polynesians may at some time have landed on the western coasts of America. But such a landing, if it occurred, would have been effected long after the American race had spread themselves over that conti-

nent; an event which must be dated much further back than the peopling of Polynesia itself. For the Polynesian languages, with their dilapidated Malay numerals, and the general evidence relating to the Polynesian race, which is completely considered in the work of De Quatrefages, *Les Polynésiens et leurs Migrations*, tend alike to show that Polynesia was peopled in comparatively, if not actually, modern times. "The ordinal value of the Polynesian class (of languages)", writes Dr. Latham (*Comp. Phil.*, p. 377), "is as low as that of the Turk; and if we allow for the difference between a wide diffusion over a continent and a wide diffusion over an ocean, it is with the Turks that the Polynesians must be compared. They have spread both recently and rapidly. In the Micronesian and Malay groups there must be some five or six sections, each of which is of as high an ordinal value as all Polynesia. On the other hand, it is possible that the oldest island beyond the Samoan Archipelago has received its population from the Navigators' Islands subsequent to the date of the settlement of the Norwegians in Iceland." This being the case, the Polynesian element in America, if there were any such element at all, could only be insignificant; so that, as America is not likely to have been originally peopled from the side of the Atlantic either, we may pursue the evidence with our eyes fixed upon Alashka as the region where the human race first set foot upon the soil of the New World.

CHAPTER II.

QUICHUA AND AMERICAN AFFINITIES AS DEDUCED FROM NUMERALS.

This investigation may be opened with the numerals, 'two', 'four', and 'eight', which are, in Quichua, *yskay*, *ttahua* (*-hua*=English *-wa*), and *pussak*. This last is written by Markham *pussac*, and by Nodal *puzac*. 'Four' is given by Nodal as *tahua*, by Markham as *ttahua*, and by Lopez as *t'tahua;* and there are some other slight differences of orthography in other terms, but none of consequence. The Quichua 'four', *ttahua*, is compared by Lopez with the Aryan *dva-dva*, 'two-two'; and *yskay*, 'two', with such a form as the German *zwei*. I should here go further than Lopez, as I believe that not only the Quichua and the Aryan 'two' and 'four', but 'eight' as well, are ultimately identical in both systems of language; and that, in each, 'four'='two-two', and 'eight'='two-two-two'. Yet, in spite of this, I cannot coincide in the opinion entertained by Lopez, that there is a peculiar affinity between the Quichua and the Aryan, to the exclusion of other languages: for I should consider that, as far as these three numerals are concerned, the Quichua is identical, not with the Aryan alone, but also with a number of languages in other parts of America, as well as with the Basque, the Georgian, the Circassian, the Tungusian, the Chinese, the Siamese, the Malay, and the Polynesian. In comparing languages together, or at least in comparing numerals, which commonly preserve the earliest rudiments of a language, any induction that is to be sound and impartial must be extended over the widest area possible. The evidence of the ultimate affinity of all languages may otherwise be mistaken for evidence of a special affinity between two languages in particular, each of which has nearer rela-

tives elsewhere. Etruscan researches frequently err in this respect.

If the view given above be correct, that the several 'twos', 'fours', and 'eights' mentioned have a common origin, then there would be in all three numerals only a single element, 'two'. What the complete form of this 'two' originally was, is uncertain; but it seems to me to have been not far from *ǵwar* or *aǵwar*, and to be resolvable into 1+1, *ǵa* (or *aǵ*)+*war*. Gesenius, however, judging from the Semitic and Aryan languages, both of which possess the 'two' in question, has inferred the original form to be rather different. "The primary form of the numeral", he says, (*Heb. Lex.*, ed. Tregelles), "appears to be תני, from which have been softened Sanscr. *dwi*, dual *dwâu*, compare *twa*, other, different, Goth. *twa*, *twā*, *twai*, whence Eng., Germ. *two*, *zwo*, Gr., Lat. *δύο*, *duo*." According to this supposition, it should be an *n* that our own 'two' has lost, instead of an *r*, as implied in the supposition that the original form was *ǵwar*. But it would, in either case, be some liquid that is deficient; and this may be confirmed from the Tungusian languages: for they give us *ẓur*, *ǵur*, and *dyul*, for 'two', as well as *du-in*, *dy-gyn*, and similar forms, for 'four',='two-two'. In America, the liquid appears, not as *r* or *l*, but as *n*; as, e.g., in the Californian 'twos', *pen*, *eshin*, and *teene*, which last correspond closely with Semitic 'twos': but in Aryan 'fours', such as the Gothic *fi-dvôr*, etc., and in the Basque and Georgian 'eights', *zor-tzi* and *r-va*, the liquid is an *r*, as also in the Lazic 'two', *ẓur*; a West-Caucasian numeral whose elements, each implying 'one', may be found in the East-Caucasian 'ones', *sa*, *zo*, *ża*, and in the Lazic *ar* and the Georgian *er*thi, 'one'. The suffix in the Georgian *er-thi*, 'one', which may be compared with the Basque *er-hi*, 'finger', is seen, reduplicated, in the Georgian *thi-thi*, 'finger' (cf. Chinese *ćí*, 'finger, toe'), and probably in the Armenian *tha-th*, 'hand',='fingers',='finger-finger'.

In the Quichua *yskay*, 'two', I take *-kay* not to be a part of the original 'two', as *-ei* would be in the German *zwei* (with which Lopez compares *yskay*), and in the Mantshu *dzheio* or *ǵeio;* but rather to be a mere suffix, like *-cua, -cu, -ko, -ke, -k,* in other American numerals; *-gu, -go, -ba, -khi, -thi, -i, -kh, -t,* in the Caucasus; and *-gu, -ko, -ku, -ya, -ia,* in the Himalaya and India. In the Quichua *kanć-is,* 'seven', a numeral commonly equivalent to 'five-two', the supposed suffix *-kay,* in *ys-kay,* 'two', would not appear in the final element of 'seven', *-is,* 'two'. This would reduce 'two' in Quichua to *ys* or *is,* or even to *s,* if *y* or *i* be only a prosthetic vowel, as it would be if the original form of 'two' was *ǵwar,* instead of *aǵwar.* But this is unimportant.

Of the 'eights' comprised in the list soon about to be given, two are clearly enough = 'two-four': for the Ende (Malay) *rua-butu,* 'eight', is manifestly = Ende *rua-wutu,* 'two-four'; and the Netela (California) *wehe-sważa,* 'eight', would in like manner be = Netela *wehe-waża,* 'two-four'. But each of these 'eights' I should be inclined to take as reconstructions; as comparatively modern formations from 'two-four' to supply the place of the ancient 'eight', which had ceased through phonetic decay to indicate the factors of which it was composed, and had thus lost some of that significance which would tend to facilitate computation, and make its results clearer to a barbarous mind. Yet we can hardly doubt that these ancient 'eights', thus supposed to be replaced, were originally formed in the same manner as their modern substitutes; for one of them, the *wehe-sważa* (cf. German *zwei-zwei-zwei*) of the Californian Netela, seems only a more perfect form of the St. Raphael (also Californian) *wu-su-ya,* 'eight', or of the Kutani 'eight', *wawah-sah,* in the mountains of Oregon, which last form, *wawahsah,* is still nearer to the Netela *wehe-waża,* 'two-four', than it is to the Netela *wehesważa,* 'eight'. It is obvious that the St. Raphael 'eight', *wusuya,* is an old

form, and no modern construction from the St. Raphael *oza*, 'two', and *wiag*, 'four': and a similar conclusion results from comparing the Kutani *wawahsah*, 'eight', with the Kutani *ass*, 'two', and *hazah*, 'four'. The other of the two supposed recent 'eights', the Ende (Malay) *rua-bu-tu*, is indeed more remote from other Malay 'eights', such as *wa-ru* and *fa-lu*, than the American 'eights' just cited are from one another; but the variation is not so great as to prevent our discerning that such other Malay 'eights' were originally 'two-four' or 'four-two', both ultimately = 'two-two-two'. This, indeed, is plain enough from Polynesian 'twos', 'fours', and 'eights', like the New Zealand *rua*, *wa*, *wa-ru*, or the Marquesus *ua*, *ha*, *va-u*.

And here we may observe, before we pass on, in illustration of the superior antiquity of the American to the Polynesian languages, how much more perfect than such Polynesian forms as these last, are a pair of kindred 'twos', 'fours', and 'eights', in Central America:—the Cunacuna *vo*cua, *pa-ke*cua, *va-u-a*gua; and the Bayano *po*vuar, *pa-ke*vuar, *pa-va-ke*. As far as 'four' and 'eight' are concerned, the Quichua *tta-hua* and *pu-ssa-k* might be adduced in confirmation of the same view. *Pake* and *ttahua*, 'four', are completer than the Polynesian *wa* and *ha*; and *vaua*, *pavake*, and *pussak*, 'eight', than the Polynesian *vau* and *waru*. But, when we fall back from Polynesia towards the west, the balance is restored, at least as far as regards 'four', as well as 'two', though American 'eights' still retain the advantage in point of completeness over Malay and other 'eights'. In the following examples from the Papuan area, which I have taken from Latham (*Comp. Phil.*, p. 381), America and Oceania stand nearly on the same level of completeness in 'two' and 'four': 'eight' is omitted, because it is composed in these Papuan vocabularies of 'five-three', instead of 'two-two-two'; and affixes are left unitalicised:—

	'Two'.	'Four',='two-two'.
	AMERICAN.	
Quichua	*ys*kay	*tta-hua*
Bayano	*po*vuar	*pa-ke*vuar
Cunacuna	*vo*cua	*pa-ke*cua
	PAPUAN.	
Brierly Island	pahi*wo*	paihe*pa-k*
New Caledonia	oua*dou*	oua*tbai-t*

For the affixes here, see my *Numerals* (p. 44), in which I have traced the presence of similar and probably kindred forms in the Caucasus, in Nepal, in India, in China, and in America. We may now proceed to the full comparison of the three numerals, 'two', 'four', and 'eight', where such affixes will be again left unitalicised.

Two, four, eight.

	'Eight',=	'Four',=	'Two',
SOUTH AMERICA.	2×2×2.	2×2.	2.
Aymara (Peru)	. . . .	*pu-si*	*pa*
Araucanan (Chili)	. . . .	. . .	*epu*
Juri (Rio Negro)	. . . .	. . .	*peia*
Taruma (Guiana)	. . . .	. . .	*tyuwa*
Vilela (Bolivia)	. . . .	. . .	*u*ke
Carib	. . . .	. . .	*ta*ge
			*we*cu
			*o*co
			*a*ke
			*asa*ke
			*asa*kre
QUICHUA	*pu-ssa-k*	*tta-hua*	*ys*kay
Guato (Paraguay)	. . . .	*de-kai*	*dououni*
Patagonian	*wene-ke-ka*gue[1]	*ke-ka*guy	*xeu*kay

[1] That *wene-* here is 'two', appears from the Patagonian *wene-cash*,

	'Eight',=	'Four',=	'Two',
NORTH AMERICA.	2×2×2.	2×2.	2.
Cunacuna (Darien)	*va-u-a*gua	*pa-ke*cua	*vo*cua
Bayano (Guatemala)	*pa-va-ke*	*pa-ke*vuar	*po*vuar
Pima (New Mexico)	*ki-ki-g*	*kii-k*	*kua*k
Tesuque (New Mexico)	*kuh-beh*	*ion-ouh*	*kihyeh*
Attakapa (Texas)	*ż̇i-kui-au*	*ż̇e-ż̇*	
Kioway (Texas)	*ia-ż̇a*	*ia-ki*	*gia*
Chemehuevi (New Mexico)	. . . .	*wa-ć̇u*	*waii*
Netela (California)	*wehe-swa-ż̇a*	*wa-ż̇a*	*wehe*
St. Raphael (California)	*wu-su-ya*	*wia-g*	*oza*
Talatui (California)	*ka-win-da*	*oi-ssu*ko	*oyo*ko
Pujuni (California)	*pe-ć̇e-i*	*pehe-l*	*teene*
Sekumne (California)	*ta-p-wi*	*ż̇i*	*pen*
St. Barbara (California)	*ma-la-hua*	*sku-mu*	*shkoho*[1]
St. Luis (California)	*shko-mo*	*pa-ksi*	*eshin*
Kutani (N.E. Oregon)	*wa-wah-sah*	*ha-ẓah*	*ass*
Unalashka (Aleutian)	. . . .	*si-khin*	
OLD WORLD.			
Yeniseian	. . . .	*she-ggiañ*	
		ć̇e-ga	
Kanskoi (Upper Yenisei)	*shi-dä-tä*	*thä-ta*	*ż̇i*da
Samoyed	*a-ghe-s*	*te-t*	*si*di
Tshuvash (Russia)	*sa-ka-r*	*dwa-tta*	*i*kke
Turkish	*se-ki-s*	*dör-t*	*i*ki
	a-gy-s	*tir-t*	*i*ki

'six', 2×3; for *keash* is 'three' in Patagonian. Compare *wene-*, 'two', with the Californian 'twos', below, *wehe*, *pen*, *teene*, and *eshin;* also with the first element in the Tesuque *ion*-ouh, 'four', 2×2, and with the middle element in the Talatui ka-*win*-da, 'eight', 2×2×2.

[1] Perhaps -*koho* here is only a suffix; but it has passed into the St. Barbara s*ku*-mu, 'four', and the St. Luis sh*ko*-mo, 'eight'. The intrusion of an *m* into these two numerals, and into the St. Barbara 'eight', *m*a-la-hua, is rather singular; but a solution of the apparent anomaly will offer itself directly.

OLD WORLD.	'Eight',= 2×2×2.	'Four',= 2×2.	'Two', 2.
Tungusian	*ǵa-k-fo*	*du-ye*	*ẓur*
	ǵa-p-kun	*dy-gin*	*ǵur*
	ća-p-ku	*du-ye*	*dyul*
	ẓa-k-un	*du-in*	*ǵeio*
	żа-k-oi	*tu-ye*	*ǵoua*
Tanguti	*ẓ-qua-t*	*ǵy-sz*	
Tibetan	*gyu-d*	*shi*	
Chinese	*pa-t*	*sze*	*i*
	pah	*sze*	*ar, eul*
Siamese	*pe-t*	*si*	*soñ*
Gyarung (China-Tibet)	*or-ye-t*	ka*di*[1]	
Kol (India)	*i-r-l*ia	*u-puni*a	*bar*ia
Khond (India)	*i-l-ar*ku	*u-pan*ku	*bar*ku
Burmese	. . . .	*le*	
Sunwar (Nepal)	*zoh*	*le*	
Basque (Pyrenees)	*zo-r-tzi*	*la-u*	*bi*
Circassian (Caucasus)	*yi*	*t-ley*	*oh*
Georgian (Caucasus)	*r-va*	*o-th*khi	*or*i
Lazic (Caucasus)	*o-vr-o*	*o-t*kh	*ẓur*
Etruscan dice (Tuscany)	. . . .	*hu-th*	*thu*
Tuschi (Caucasus)	. . . .	*dhe-w*	*shi*[2]
Lesgi (Caucasus)	*bei-t-l*gu	*bo-o*gu	*ćе*gu
	*mi-t-l*go[3]	*u-k*go	*ki*go

[1] Compare the Gyarung prefix, *ka-*, with the Quichua suffixes, *-kay* and *-ka*, and other suffixes in America, the Himalaya, India, and the Caucasus (*ante*, p. 16).

[2] The base is *shin* (Schiefner), which is like the Hebrew *shen-*. Three other forms of the Tuschi 'four' are given by Schiefner:—*bhew* (cf. Lesgi *boo*gu), and also *whew* and *yhew;* between which and the Georgian *oth*khi the *huth* of the Etruscan dice is intermediate. In the Basque 'four', *lau*, the *d* of the Tuschi *dhew*, 'four', is weakened into *l*, as it is still further, in the Tuschi *yhew*, into *y*.

[3] The change of *bei-* into *mi-* here, and the corresponding change in the Ude *mu*-gh, 'eight', immediately following, may explain the appear-

Old World.	'Eight',= 2×2×2.	'Four',= 2×2.	'Two', 2.
Ude (Caucasus)	*mu-gh*	*bi-p*[1]	*pha*
Abkhasian (Caucasus)	*a-a*ba	*ph-shi*ba	*vi*ba
Gothic	*a-h-tau*	*fi-dvôr*	*tvai*
Welsh	*wy-th*	*pe-dwar*	*dwy*
English	*ei-gh-t*	*f-our*	*two*
Armenian	*ov-th*	*ć-or*	*er*ku
Latin	*o-c-to*	*qua-tuor*	*duo*
Wallachian	*o-p-t*	*pa-tru*	*doi*
Russian	*vo-sem'*	*će-ture*	*dva*
Sanskrit	*a-sh-tan*	*ća-tvâr*	*dvi, dva*
Hebrew	. . . .	*ar-ba'*	*shën*aim
Syriac	. . . .	*ar-bo'*	*thër*en
Amharic (Abyssinia)	. . . .	*arr-u*	
Arkiko (Abyssinia)	. . . .	*u-bah*	
Coptic	. . . .	*f-to*	*sn*au
Houssa	*ta-gwa-s*[2]	*fu-du*	*bui*
Mandara (Bornu)	*ti-si*	*ufa-de*	*bua*
Timbuktu	*ya-ha*	*ata-ki*	
Dizzela (Abyssinia)	*su-ggua-ta*	*zaa-ća*	
Berber	. . . .	*ku-z*	*then*at
Malay—Ende	*rua-bu-tu*	*wu-tu*	*rua*
Java	*wo-lu*	*pa-t*	*ro*

ance of an *m* in some Californian numerals, such as the St. Barbara *ma-la-hua*, 'eight' (*ante*, p. 19), with which compare the Lesgi *mi-t-l*go, 'eight'. In *ma-la-hua*, *ma*=d*va*=*hua*=*dva*=*la*.

[1] *Bi-p* is a doubling of the Basque *bi*, 'two'; a numeral which supplies one element to the Basque zaz-*pi*, 'seven', 5+2, and to the Abkhasian *bi*-sh, 'seven', 2+5 (*ante*, p. 10). This Basque *bi*, again, when combined with the Circassian *tley*, 'four', would produce the Lesgi (Andi) *bei-tl*gu, 'eight', 2×4. The Basque 'two', 'four', and 'eight', with the 'two' and 'four' of the Etruscan dice, do not differ more from Caucasian 'twos', 'fours', and 'eights', than such Caucasian numerals differ from one another. All might be classed together under the name "Iberian".

[2] Compare this African 'eight', *tagwas*, with the Turkish 'eights', *sekis* and *agys*, and with the Samoyed 'eight', *aghes*.

Old World.	'Eight',= 2×2×2.	'Four',= 2×2.	'Two', 2.
Malay—Kayan	*sa-ya*	*pa-t*	*duo*
Bima	*wa-ru*	*opa-t*	*lua*
New Ireland	*wa-l*	*ha-t*	*ru*
Rotti	*fa-lu*	*ha-a*	*dua*
Pelew	*ta-i*	*o-añ*	*oru*
Caroline	*wa-l*	*tan*	*ru*
Fiji	*wa-lu*	*va*	*rua*
Hawaii	*va-lu*	*ha*	*lua*
New Zealand	*wa-ru*	*wa*	*rua*
Marquesas	*va-u*	*ha*	*ua*

In the preceding table, some languages agree with the Quichua in one of the three numerals, 'two', 'four', and 'eight'; some in two of those numerals; and some in all three. The list of languages connected by such a triple concord extends to these families or countries:—

Patagonian.
Quichua.
Darien.
Guatemala.
New Mexico.
Texas.
California.
Oregon.
Tungusian.
Samoyed.
Turkish (if 'two' may be included).
Chinese.
Siamese.
Malayo-Polynesian.
Sudan.
Basque.
Ude.

Lesgi.
Georgian.
Circassian.
Abkhasian.
Aryan.

These languages may be collected into five classes: the American, the Aryan, the Turanian, the Iberian, and the Sudanian in Africa; the Sudanians being the members of the African race who would have remained longest in contact and communication with other races than the Semitic, and the Sub-Semitic or Libyan. As, then, one of these five classes, the Aryan, has been deduced from Mount Imaus, so it may appear probable that the plateau of Central Asia, of which that mountain-range is the western rampart, was the region where the previous 'twos', 'fours', and 'eights' first took form, and whence they spread over so vast a portion of the world. Supposing, therefore, that plateau to be the place of their origin, those three numerals would have been carried on one side towards the south and west, first by the Sudanian Africans, then by the Iberians, and, finally, by the Aryans; and, on the other side towards the east, first by the Americans, and afterwards by the Turanians. For we may link geographically together, in the following manner, the nations and countries, just enumerated, which have 'two', 'four', and 'eight' in common:—

Patagonia
Peru
Darien
Guatemala
California—New Mexico—Texas
Oregon
} America.

Tungusian
Samoyed
Turkish
} Turanian.

PLATEAU OF CENTRAL ASIA.

Aryan		Kol
Abkhasian		Chinese
Circassian		Siamese
Georgian		Malay
Lazic	Iberian.	Polynesian
Lesgi		
Ude		
Basque		
Sudan		

Turanian.

That the connection between these languages is one which dates from a very remote antiquity, appears not merely from the length of the chain formed by them, which reaches from Sudan to Patagonia, but also from the fact that it is frequently difficult, if not impossible, to take the 'two' of any particular language among them, and from it to derive the 'four' and 'eight' of the same language, the one as 'two-two', and the other as 'two-two-two'. Our own *two*, *four*, and *eight*, may be taken as examples. Here we must resort to other languages, and those languages not even Aryan, in order to make out the derivation; although, when that derivation has been made out, we may see, in such an instance as that of the English *ei-gh-t*, or of the German *a-ch-t*, how three 'twos', like those which would be required to form these 'eights', might be collected from three Aryan 'twenties', the Greek *ei*kosi, the Armenian *ch*san, and the Swedish *t*jugo. The case is similar in other languages, always excepting such instances as I have noticed above, and considered as comparatively new reconstructions of older 'eights': the Californian *wehesważa*, = *wehe-waża*, 'two-four'; and the Malay *ruabutu*, = *rua-wutu*, 'two-four'. We must, as it appears to me, suppose that a number of 'twos', 'fours', and 'eights', our own three numerals included, were constructed and became current in

Central Asia before the progenitors of the Aryans, the Iberians, the Turanians, and the Americans, ceased to be in communication with one another; and that each race appropriated to itself, out of the floating capital of variants, the oldest forms of those which their members now employ.

The following numerals, selected from the list given above, may be used to show in what manner different and remote languages serve here to explain one another:—

Polynesian *ha*, 'four' (one 'two' deficient).
Malay *haa*, 'four'.
hat, 'four'.
pat, 'four'.
Chinese *pat*, 'eight' (one 'two' deficient).
Siamese *pet*, 'eight'.
Californian *pećei*, 'eight'.
Peruvian (Quichua) *pussak*, 'eight'.
(Aymara) *pusi-pa*, 'four-two'.
Abkhasian *phshi*ba-*vi*ba, 'four-two'.
*aa*ba, 'eight' (one 'two' deficient).
Anglo-Saxon *eahta*, 'eight'.
Armenian *ovth*(=*uth*), 'eight' (one 'two' deficient).
Etruscan dice *huth*, 'four'.
thu, 'two'.
Circassian *oh*, 'two'.
Georgian *oth*khi, 'four'.
Lesgi *uk*go, 'four'.
Latin *octo*, 'eight'.
Malay *wutu*, 'four'.
Welsh *wyth*, 'eight' (one 'two' deficient).
Tshuvash *dwatta*, 'four'.
Mantshu *tuye*, 'four'.
Peruvian (Quichua) *ttahua*, 'four'.
Pelew *tai*, 'eight' (one 'two' deficient).
Californian *tapwi*, 'eight'.

Upon the whole, in the Old World, the Chinese and the Siamese languages, allowing for their having lost much in their numerals from phonetic decay or some other cause, appear to come nearest to the Quichua in 'two', 'four', and 'eight', when taken collectively. The affinities may be thus presented:—

	'Eight'.	'Four'.	'Two'.
Taruma (Guiana)			*tyuwa*
Carib			*ta*ge
			*a*ke
			*asa*ke
Sekumne (California)	*tapwi*	*żi*	*pen*
Netela (California)	*wehesważa*	*waża*	*wehe*
Pujuni (California)	*pećei*	*pehel*	*teene*
Attakapa (Texas)	*żikuiau*	*żeż*	
Samoyed	*aghes*	*tet*	*si*di
Unalashka (Aleutian)		*sikhin*	
Yeniseian		*sheggiañ*	
		ćega	
Tungusian	*ẓapkun*	*diggin*	*dyur*
	ẓakun	*duin*	*ǵeio*
	żakoi	*tuye*	*ǵoua*
Tanguti	*ẓquat*	*ǵysz*	
Tibetan	*gyud*	*shi*	
Shan	*tet*	*że*	*żouñ*
Siamese	*pet*	*si*	*soñ*[1]
Chinese	*pat*	*sze*	*i*[2]
QUICHUA	*pussak*	*ttahua*	*ys*kay

The monosyllabic character of the Chinese language may have operated to reduce these numerals to monosyllables. One American language, the Otomi of Mexico, has been, on

[1] Compare the Chinese *shwáñ*, 'pair, brace, couple'.

[2] Our 'two' is more nearly found in the Chinese *tsoi*, *tsái*, 'a second time, *bis*'. Cf. Japanese *tsui*, 'pair'.

account of its monosyllabic character, specially connected by some with the Chinese, and separated from the other American languages; a separation which has been rightly disallowed, and which seems as inadmissible as that of the Quichua from the same family of languages.[1] Other American languages are quasi-monosyllabic, one of them being the Attakapa, a language of Texas in the list immediately above.[2] It is, as may be discerned here and elsewhere, the languages of California, New Mexico, and Texas, which afford the nearest and most numerous North American parallels to the Quichua; an affinity tending to connect the Quichua nation with the Pueblo Indians, a people who, when first discovered by the Spaniards, were only inferior in civilisation to the Mexicans and the Peruvians.[3]

Before passing on to the next members of the Quichua decade, another illustration may be given of the fact, that Chinese numerals may be considered as nothing more than a reduction to monosyllables of numerals existing more perfectly in America. An Iberian 'hundred', and some Iberian 'eights', seem to have suffered similar mutilation:—

	'Hundred'.	'Eight'.	'Four'.	'Two'.
American—Quichua	*paćak*	*pussak*	*ttahua*	
Aymara	. . .	. .	*pusi*	*pa*
Turanian—Chinese	*pak*	*pat*	*sze*	*i*
	peh	*pah*		
	pai	*pa*		
Iberian—Tuschi	*bah*	. .	*dhew*	*shi*
Abkhasian	. . .	*aa*	*phshi*	*vi*
Ude	. . .	*mugh*	*bip*	*pha*
Circassian	. . .	*yi*	*tley*	*oh*

[1] Latham, *Comp. Phil.*, p. 431. [2] *Ib.*

[3] Domenech, *The Great Deserts of North America*, ii, 52. Domenech is inclined to regard the Pueblo Indians as descendants of some Toltec

Here the Chinese *pak* bears to the Quichua *paćak* an analogy like that which the English *four* bears to the Gothic *fidvôr*, or the French *huit* and the Italian *otto* to the Latin *octo*.

One, three.

The next Quichua numerals which I propose to take in hand are 'three' and 'one', *kimsa* and *huk*; *kim-sa* (in Cayuvava, *kim-isa*), 'three', being resolvable into 'one-two', and the second element in kim-*sa* or kim-*isa* being, like the second element in pu-*ssa*-k, 'eight', equivalent to *ys*-kay, 'two', and the kindred terms already considered. We shall thus have to find parallels for *kimsa*, 'three', *kim*-, 'one', and *huk*, 'one':—

AMERICA.	'Three', 1+2.	'One'.	'One'.
Guato (Paraguay)	*ćoum*	*ćenai*	
Tupi (Brazil)	. . . .	*couai*	
	boa-poui		
	boa-peu		
	. . . .	*pañ*	
Taruma (Guiana)	*uñ-kehah*	*uñ-*	*oshe*
QUICHUA	*kim-sa*	*kim-*	*huk*
Esquimaux—Unalashka	*kan-ku*	*kan-*	
Kadiak	*pinga-svak*[1]	*pinga-*	
Kuskutshewak	*painai-vak*	*painai-*	
Labrador	*pinga-sat*	*pinga-*	
(Asiatic Esquimaux)	*pinga-u*	*pinga-*	
	pega-yut	*pega-*	
St. Barbara (California)	. . . .	*paka*	
Kioway (Texas)	*pa-o*	*pahko*	

colonists "who settled on the banks of the Gila and the Rio Grande long before the Aztec emigration to Mexico". One Pueblo language is the Tesuque, which will often be cited in these pages.

[1] Here *-ga* and *-k* would be suffixes, like those which have been already so frequently noticed.

	'Three', 1+2.	'One'.	'One'.
AMERICA.			
Netela (California)	*pa-he*	*pu*ku	
Tesuque (New Mexico)	*poh-yeh*	*guih*	
Talatui (California)	. . . .	*kina*ti	
Kutani (Oregon)	*kalle-sah*	hook *kain*	*hook* kain
Patagonian	*kea-sh*	cheu*quen*	*cheuq*uen
Araucanan (Chili)	*cul-a*	*quigne*	
AUSTRALIA.			
Karaula	*cule-ba*		
Parnkalla	*ka-ppo*	*kuma*	
King George's Sound	. . . .	*ken*	
West Australia	. . . .	*kain*	
Witouro	. . . .	*koen* moet	
AFRICA.			
Esitako (Niger-Tshadda)	. . . .	*gbani*	
Padsade (Senegambia)	. . . .	*paini*	
Timne (Sierra Leone)	. . . .	*pin*	
Udso (Niger-mouth)	. . . .	*kan, kani*	
Akurakura (Old Calabar)	. . . .	*koñ*	
Gura (Liberia)	. . . .	*gun*	
Kanyika (Upper Congo)	. . . .	*kam*	
ASIA.			
Yeniseian	. . . .	. . .	*huća*
Korean	. . . .	. . .	*hoǵun*
Tibetan	. . . .	. . .	*ćik*
Chinese	. . . .	*ćün*	*ćik*
			ćit

The closest Quichua affinities seem here to be American, and next Australian; both Americans and Australians having parallels on one side with the Turanians, and on the other with the Africans: or, if we class races by colour, not always an accurate mode of definition, the Red Men of

America and the Swarthy Men of Australia would be intermediate in language to the Yellow Men of Eastern Asia and the Black Men of Africa. The Malays, or Brown Men, also present in their languages a quantity of parallels to those of the Africans, as I have noticed in my book on *Numerals;* and some of these parallels affect Europe and America as well: thus the African 'threes', *tal* and *tsala,* not only resemble the Malay 'threes', *tal, tulu,* and *telu,* but also the *zal* of the Etruscan dice (*infra,* chap. v), and the Talatui *teli*ko in California. There are two ways of explaining African affinities like these, which crop out in parts of the globe most remote from one another. They may either be explained entirely by the primeval affinity which unites the African race to mankind in general, and to certain other races of men in particular; or they may be explained, partly from this primeval affinity, and partly by the supposition, that the races who left the primitive home of mankind later than the Africans, found those Africans where they themselves settled in their migrations from the centre of the Old World, and received, in consequence, some African intermixture. I incline myself, while upholding the doctrine of primeval affinity and its results upon language, to believe that there was intermixture also, both in blood and speech; a supposition on which I have endeavoured elsewhere to account for the African affinities of the Basque language: and I should conjecture that, when the Iberians migrated from Asia into Europe, they may have found there some members of an Ethiopian race allied to the modern Negroes and Kaffirs; that the Dravidas, Chinese, Malays, and other Turanians, found in like manner a kindred race, now represented by the Melanesians, in the countries which they occupied; and that there was also, though this is more doubtful, a race of the same origin in the Arctic regions of the Old World. These supposed Arctic Ethiopians, for whom the name of 'Hyperboreans'

might be suggested, would hardly have left any representatives at the present day; but would have been absorbed, partly by the ancestors of the Americans when they passed through North-Eastern Asia on their way to Alashka from the Central Asiatic Plateau, and partly, at a later time, if any were left, by such Turanians as spread themselves northward, like the Tungusians and the Fins. Probably none of this ancient Ethiopian race, which I have hypothetically divided into Africans, Melanesians, and Hyperboreans, would have passed into America independently, or in an unmixed state. Their connection and mixture with the Early Americans would rather have been effected in Asia itself, in the regions of Eastern Tartary and Siberia; although it is possible that some few Ethiopians may have reached the New World before the Americans, as some few Melanesians may have anticipated the Polynesians in Polynesia. A sculptured figure of the true Negro type is said to have been lately found in Mexico.

As America and Polynesia seem, to a certain extent, parallel cases in their mode of population, I subjoin here, from De Quatrefages, the results of his inquiries relative to the first peopling of Polynesia (p. 176):—

"Les Polynésiens se sont établis et constitués d'abord à Samoa et à Tonga; de là, ils sont passés dans les autres archipels de l'immense océan ouvert devant eux.

"En abordant les îles qu'ils venaient peupler, tantôt les émigrants les ont trouvées entièrement désertes, tantôt ils y ont rencontré quelques rares tribus de sang plus ou moins noir, évidemment arrivées là par quelques-uns de ces accidents de navigation qu'ont pu constater presque tous les voyageurs Européens.

"Soit purs, soit alliés à ces tribus nègres erratiques, ils ont formé de centres secondaires d'où sont parties de nouvelles colonies qui ont étendu de plus en plus l'aire Polynésienne.

"Aucune de ces migrations ne remonte au delà des temps historiques.

"Quelques-unes des principales ont eu lieu soit peu avant, soit peu après l'ère chrétienne; d'autres sont bien plus récentes, et il en est de tout-à-fait modernes."

America would have been peopled much earlier than this, as the comparison of numerals will have already shown.

Five, Seven.

We have now analysed and compared the Quichua numerals for 'one', 'two', 'three', 'four', and 'eight', as well as for 'hundred'. The next numerals which may be appropriately considered together are 'five', and 'seven', *pićka* (= Aymara *piska*), and *kanćis*. The *-ka* of *pić-ka*, 'five', is most probably, at least in my opinion, no more than a suffix, like the *-kay* of the Quichua *ys-kay*, 'two', and the terminations of the lately cited 'ones' of California and Texas, *pa-ka*, *pah-ko*, and *pu-ku* (p. 28). Moreover, if we retrench this supposed suffix, *-kay*, from the Quichua *ys-kay*, 'two', we reduce it to *ys*, which is almost the same as the termination of the Quichua *kanć-is*, 'seven', a numeral usually = 'five-two'. We may, consequently, with considerable probability, infer that *kanć*, as well as *pić*, is a Quichua 'five', which would make the complete form of the Quichua 'five' to be like *kpainć*, *kpenć*, or *quenć* (pronounced like the English word *quench*). For such a 'five' there are many parallels, of which some have been already given above (p. 8). What are now added below seem sufficient to show the affinities of the Quichua 'five':—

'Five'.

Quichua *pić*

kanć-

Complete Quichua form *kpenć* or *quenć*

Aryan—Pakhya *pać*

Tharu *paće*

'Five'.

Sanskrit *pañćan*
Greek *pente*
Lithuanian *penki*
Armenian *hing*
Latin *quinque*
Kanyop (Senegambia) *kanyan*
American—Chinook *kwanam*
Unalashkan *khaan*
Talatui *kasa*ko
St. Raphael *kene*kus
Uchee *ćwanhah*
Tesuque *pahnouh*
Kioway *onto*

To complete the comparison, 'five' and 'seven' must now be taken in conjunction :—

	'Five'.	'Seven'.
Quichua	*pić*ka	*kanć-is*, 5+2.
Talatui (California)	*kasa*ko	*kani-ku*k, 5+2.
Tesuque (New Mexico)	*pahnouh*	*ća-e*, 5+2.
Patagonian	*keyżum*	*ku-ka*, 5+2.
Attakapa (Texas)		*pa-ghu*, 5+2.
Kuskutshewak (Alashka)		ainaa-*khvanam*, 2+5.
Unalashka (Aleutian)	*khaan*	*u-kun*, 2+5.
Chinook (Oregon)	*kwanam*	
Burmese		*khun*-nith, 5+2.
		khwan-nhach, 5+2.
Sanskrit	*pañćan*	sap-*tan*, 5+2.
Greek	*pente*	hep-*ta*, 5+2.
Lesgi (Caucasus)		*ante-l*go, 5+2.[1]
Kioway (Texas)	*onto*	*pan-ża*, 5+2.

[1] *Ant*go and *ankh*go are 'six', while *ants*go and *anz*go are 'ten'; whence *ant-*, 'five', may be inferred. For *-l*, 'two', see p. 20.

Here the Aryan approaches nearer to the Quichua and its American kindred than the Turanian does; for the Aryan has the same 'five' that the Quichua has, and also employs in 'seven' the same 'two', though combining it with a different 'five', *sap-*, which has been explained above (p. 10), and will be noticed again when the Quichua 'six', *sokta*, comes under review. The Burmese, on the other hand, employs in 'seven' a different 'two' from the Quichua, but the same 'five': yet it has not this 'five' for the actual numeral, 'five', as the *khun-* or *khwan-*, 'five', of the Burmese 'seven', can hardly be identified with the Burmese five, *ñá*. The Chinese has *'ñ*, 'five', and *ż'at*, 'seven'.

The Tungusian 'five', *tonga*, belongs, I think, to a different class of *hand-fives* from that which includes the Aryan and the Quichua 'five' (*ante*, p. 32); but it may possibly be allied to the Quichua *ćunka*, 'ten', a numeral for which it is difficult to select the right explanation and the true affinities.

Ten.

The most obvious parallels to the Quichua seem those given below:—

'Ten'.

Patagonian *xaken*
QUICHUA *ćunka*
Kioway (Texas) *cokhi*
Tesuque (New Mexico) *taheh*
Tungusian *ǵuyen*
ǵuan
ǵan
Turkish *on*
Lesgi *ant*go
Tshuvash (Russia) *wonka*
Kurile *wambi*
Mampa (Sierra Leone) *wañ*
Mano (Liberia) *pfuñ*

All these 'tens' would hardly, however, be akin to one another. The two African 'tens', for instance, which close the list, would belong to the same class of *hand-five* as the Quichua and Aryan 'five', and as the Bola (Senegambia) *kanyen*, 'five'; for these African 'tens', *wañ* and *pfuñ*, and an African 'five' like *kanyen*, are to be classed with the African *vañ*, 'upper arm' (Kasm), *pfen*, 'leg' (Nso), and *kañyen*, 'arm' (Bola), which rank with the Patagonian *fan*, 'hand', and the Catoquina *pañ*, 'arm', in South America. In like manner, the Quichua *ćunka*, 'ten', is to be compared, if not classed, with the Quichua *ćanka*, 'leg'. Yet it is not easy to say if the Quichua *ćunka*, 'ten', and *ćanka*, 'leg', supposing them to be classed together, should be referred to the same *hand-five* as such African words for 'five', 'ten', 'leg', 'arm', 'hand', etc., as those just cited; and not rather to that other African *hand-five* which appears in *tañ*, 'one', *tañ*, 'five', *tañ*, 'ten', *tañk*, 'leg', *tañga*, 'foot', *doñga*, 'hand', *ǵuñgo*, 'arm', *żanǵa*, 'hand', *żoana*, 'five'; all which are to be considered identical with the Malay *tong*, *tanga*, 'hand'; with the Australian *tona*, *tenna*, 'foot'; with the Siamese *tin*, *ten*, 'foot'; with the Tungusian *tonga*, *tonsa*, *sunǵa*, 'five'; with the Korean *sun*, 'hand'; with the Kamtshatkan *tono*, 'hand'; and with the Ugalents *żoane*, 'five', near Mount St. Elias in North America. See *ante*, p. 8.

With regard to the Tungusian 'tens' in the previous list, *ǵu-yen*, *ǵu-an*, and *ǵ-an*, it might be suspected that their first element, *ǵu* or *ǵ-*, is equivalent to the Tungusian 'twos', *ǵoua*, *ǵeio*, and *ǵur;* and, if so, then, as $10=2\times5$, the other element in 'ten', *-yen* or *-an*, would be 'five', and probably allied to the Unalashkan *khaan*, 'five', etc. The Quichua *ć-un*ka, 'ten', might possibly be explained, in the same manner, as $=2\times5$, if we regard *-ka* as a mere suffix, like *-kay* and *-ka*, in *ys-kay*, 'two', and *pić-ka*, 'five': but, if we adopt this explanation, there would be no connection between the Quichua words, *ćunka*, 'ten', and *ćanka*, 'leg';

and the disregard of such a connection appears in my eyes a very important objection, as far as the Quichua is concerned, to the following resolution of a group of 'tens':—

'Ten',=2 × 5.

Quichua *ću-nka*
Kioway (Texas) *co-khi*
Tesuque (New Mexico) *ta-heh*
Tungusian *ǵu-yen*
ǵu-an
ǵ-an
ǵ-a
Turkish *o-n*
Tshuvash *wo-nka*
Kurile—Tarakai *wa-mbi*
Yeso *fa-mbe*

Upon the whole, I should be inclined to refer the Quichua *pićka*, 'five', and *ćunka*, 'ten', to the same origin, and thus to connect them with the *q-q* class of *hand-fives*, like the Latin *quinque*, the Sanskrit *pañćan*, and the Grison *ćunc*. One reason for such a connection is found in a Paraguayan language, the Guato, some numerals of which are allied to Quichua numerals. Thus the Guato 'two' and 'four', *dououni* and *de-kai*, may be referred, like the Quichua 'two' and 'four', to our own *two* and *two-two*. Now, in Guato, *quinoida* is 'ten', and bears some resemblance to the Quichua *ćunka*, 'ten'. But, in the same Guato language, *quin-* enters into 'five', as well as into 'ten': for *quin-oibo* is 'fif-teen'; and *-oibo* comes out as '-teen' by comparison with 'eleven', 'twelve', 'thirteen', and 'fourteen', which are formed by adding *caibo*, a common South American 'hand', to 'one', 'two', 'three', and 'four'. And thus, as *dekai-ai-caibo* is 'fourteen', while *quin-oibo* is 'fifteen', *quin-* would be 'fif-' or 'five'. But this is not all: for *quać-* would also be 'five', as appears from the following Guato numerals:—

15. *quin-oibo*, 5+10.
16. *ćenai-ai-quaćoibo*, 1+15.
17. *dououni-ai-quaćoibo*, 2+15.
18. *ćoum-ai-quaćoibo*, 3+15.
19. *dekai-ai-quaćoibo*, 4+15.
20. *quinoui-ai-quaćoibo*, 5+15.

The result is, that *quin-* and *quać-* are both 'five', thus giving *quainć* or *quenć* as the complete Guato 'five', just as the Quichua *pićka*, 'five', and *kanć-is*, 'seven', gave *kpench-* or *quenć* as the complete Quichua 'five', which is thus identical with the Guato. To this same *hand-five* is to be referred the Guato *quinoida*, 'ten', and therefore, it may be, the Quichua *ćunka*, 'ten'. As *quin-* is 'fif-' in Guato, while *quinoi-da* is 'ten', it is possible that *quinoi-da* is $=5\times2$; in which case we might draw the following parallels:—

Guato *quinoui-*, 'five'.
quinoi-da, 'ten', 5×2.
Quichua *ćun-ka*, 'ten'.
Tshuvash (Russia) *won-ka*, 'ten'.
Kurile *wam-be*, 'ten'.
fam-be, 'ten'.
Kioway (Texas) *co-khi*, 'ten'.
Tesuque (New Mexico) *ta-heh*, 'ten'.
Tungusian *ǵ-a*, 'ten'.
ǵ-an, 'ten'.
ǵu-yen, 'ten'.
Patagonian *xa-ken*, 'ten'.

It may be difficult, as I said at the outset, to decide how the Quichua *ćunka* is to be best explained: but, setting aside the question of explanation, and taking up that of likeness only, there can be no doubt that the Quichua 'ten' nearly resembles Turanian 'tens'. That resemblance may, perhaps, be exhibited most obviously thus:—

'Ten'.

Tibetan *ćuh*
ću- thamba
Kurile *fambe*
wambe
Tshuvash *wonka*
Quichua *ću- nka*

Long as 'ten' has detained us, a few more observations upon it may yet be advisable. Numerals are generally derived from some word or words for 'finger'; and such would be the case in the New as well as in the Old World. For, in the Chibcha or Muysca language of New Granada we find the words: *yti-quyn*, 'finger of the hand', with *yta*, 'hand'; and *quihić-yua*, 'toe, *dedo del pié*', with *quihića* or *qhića*, 'foot': from which we get both *quyn* and *yua* as terms for 'finger'. In like manner, the Camacan *guañ wati*, 'digitus pedis', when combined with the Cotoxo *hoate* or *uadä*, 'pes', gives *guañ*, 'finger'. This falls in with what I have observed in my *Numerals* (p. 41), that all words like the Latin *quin-que*, for instance, or the Uchee *coon-pah*, 'fingers', *kean-thah*, 'hand', and *ćwan-hah*, 'five', "are apparently produced by the reduplication of some element like *que* in sound, with the frequent addition of the *anuswâra* termination, *m* or *n;* and that 'finger', 'member', or 'limb', would probably be the original meaning of this fundamental element". Referring to the work in question for a fuller exhibition of the general evidence on this point, I may present as follows its bearing on the American languages:—

Chibcha (New Granada) *quihićyua*, 'toe',='foot-finger'.
Bayano (Guatemala) *quenćique*, 'one',='foot-finger'.
Cunacuna (Darien) *quensacua*, 'one'.
quensa*cua*, 'one'.
vo*cua*, 'two', etc. (p. 19).
Chibcha (New Granada) . . *-yua*, 'finger' (see above).

Tupi (Brazil) . . *couai*, 'one'.
pañ, 'one'.
Camacan (Brazil) . . *guañ*, 'finger' (p. 38).
Chibcha (New Granada) . . *-quyn*, 'finger' (ib.)
qhyn, *quyhyn*, 'first'.
Araucanan (Chili) . . *quigne*, 'one'.
Australia . . *ken*, etc., 'one' (p. 29).
Africa . . *gbani*, etc., 'one' (ib.)
kone, 'finger'. } Gio tongue.
gene, 'toe'. }
Unalashĭka . . *kan*-ku, 'three', 1+2.
Quichua . . *kim*-sa, 'three', 1+2.
kanć-is, 'seven', 5+2.
pićka, 'five'.
paña, 'right hand'.
Chibcha (New Granada) . . *qhića*, foot'.
qhihića, 'foot'.
qhića, 'ten' (in 'eleven', etc.)
qhihića, 'ten'.
Guato (Paraguay) . . *quać-*, 'five'.
Bayano (Guatemala) *quenći-*, 'foot' (p. 38).
Iquito (Ecuador) . . *quiainoi*, 'foot'.
Guato (Paraguay) . . *quin-*, 'five'.
quinoui, 'five' (p. 37).
quinoida, 'ten'.
ćenai, 'one'.
Chinese . . *ćün*, 'one, single'.
Quichua . . *ćunka*, 'ten'.
pa-ćak, 'hundred', 10×10.[1]
Uchee (Florida) . . *ćwanhah*, 'five'.
coonpah, 'fingers'.
keanthah, 'hand'.

[1] = ultimately 'hand+hand' × 'hand + hand': or, as 'hand' = 'finger-finger', and 'finger' = 'one', 'hundred' would be an abbreviation of 'finger', or 'one', eight times repeated.

Kioway (Texas) . . *onto*, 'five'.
Tesuque (New Mexico) . . *pahnouh*, 'five'.
Patagonian . . *fan*, 'hand'.

The Quichua *paćak*, 'hundred', and *ćunka*, 'ten', in this list, have been already compared (*ante*, pp. 27, 34) with the Chinese *pak* and *peh*, and the Tuschi *bah*, 'hundred', to which the Tibetan *barkya* may now be added; and with such 'tens' as the Turkish *on* and the Tshuvash *wonka*. Primeval affinity may perhaps have produced some of the following apparent analogies in various multiples of 'ten':—

Quichua *hunu*, 'million', $10\times10\times10\times10\times10\times10$.
Basque *ehun*, *eun* } 'hundred', 10×10.
Sibsagar Miri *uyiñ-uyiñko*, 'hundred', 10×10.
uyiñe, 'ten'.
Abor Miri *uiñko*, 'ten'.
Turkish *on*, 'ten'.
Tshuvash *wonka*, 'ten'.
Quichua *ćunka*, 'ten'.
Kioway (Texas) *cokhi*, 'ten'.
Tesuque (New Mexico) } *taheh*, 'ten'.
Chinese *yik*, *yih* } 'hundred thousand', $10\times10\times10\times10\times10$.
pak, *peh* } 'hundred', 10×10.
Tuschi (Caucasus) *bah*, 'hundred', 10×10.
Tibetan *barkya*, 'hundred', 10×10.
Gyarung (E. Tibet) *parye*, 'hundred', 10×10.
Thaksya (Nepal) *bhra*, 'hundred', 10×10.
Quichua *huaranka*, 'thousand', $10\times10\times10$.
Armenian *harivr*, 'hundred', 10×10.
bivr, 'myriad', $10\times10\times10\times10$.
Persian *bayvar*, 'myriad', $10\times10\times10\times10$.
Zend *baêvare*, 'myriad', $10\times10\times10\times10$.

Nine.

The Quichua for 'nine', *yskun*, seems to begin with *yskay*, 'two': yet I am not aware that any 'nine' has been resolved into 'two-seven'; nor is such resolution a probable one. But 'nine' can be resolved into 'four-five', as 'fourteen' is resolved into 'four-ten': and we have previously seen abundantly that 'four' is frequently 'two-two'. The original value of the Quichua 'nine', *yskun*, may thus have been 'two-two-five', which would explain its resemblance to *yskay*, 'two'. And this inference is confirmed by comparing *yskun* with the 'nine' which comes nearest to it, the Unalashka *sikheen*. For *sikheen*, 'nine', is clearly resolvable into the Unalashka *sikhin-khaan*, 'four-five', as the Unalashka *kan-kheen*, 'eight', is into the Unalashka *kanku-khaan*, 'three-five'; this Unalashka *kan*-ku, 'three', 1+2, it may here be observed also, having given us earlier, with the aid of the kindred Esquimaux 'threes', pinga-*svak* and pinga-*sat*, the explanation of the Quichua *kim-sa*, 'three'; so that the Quichua and the Esquimaux have been already found to bear upon one another. Turning now from Unalashka to the other extremity of America, we see that the Patagonian *keka-xeżum*, 'nine', is as manifestly = Patagonian *keka*guy-*keyżum*, 'four-five', as the Unalashka *sikh-een*, 'nine', is= Unalashka *sikhin-khaan*, 'four-five'.

It is uncertain, and unimportant, whether the Quichua *yskun*, 'nine', should be resolved into *ys-kun*, 'two-five', one 'two' being deficient (cf. Unalashka *u-kun*, 'seven', 2+5); or into *ys-k-un*, 'two-two-five' (cf. Unalashka *at-un*, 'six', 1+5, *atoken-khaan*. These are the closest parallels which I have found for *yskun*:—

'Nine'.

Papiah (Guinea) *sipo*
Madagascar *siva*
Timor *sioh*

'Nine.'

Tagala (Philippine) *siyam*
Unalashka *sikheen*
Yangaro (White Nile) *izgin*
Quichua *yskun*
Mongolian *yisun*
yeso
Tungusian *yegin*
uyun
khuyu
Korean *yahao*
Timbuktu *yaga*
Songo (Congo) *yivo*
Angola *ivoa*
Marquesas *iva*
Tonga *hiva*
Fiji *tiva*
Caroline *tihu*
Attakapa (Texas) *tegghuiae*
Singpho *tiekho*
żekhu
Kowelitsk (British Columbia) *tookhu*
Patagonian *kekaxeżum*
Kioway (Texas—New Mexico) *cohżu*
Tesuque (New Mexico) *kuaenouh*
Skwali (British Columbia) *khoun*
Annamitic *kyin*
Tungusian *uyen*
huyu
Talatui (California) *ooi*
Chinese *kiu*
kau
Siamese *kau*
Burmese *ko*

From the foregoing group of 'nines' we may see once more, as previously in the numerals, 'hundred', 'eight', 'four', and 'two', how greatly Chinese numerals have apparently suffered from mutilation. For who could discern, without the help of other languages, and especially the American languages, that the Chinese 'nines', *kiu* and *kau*, with the Burmese 'nine', *ko*, may be identical with the Aryan *two-two-five*, *duo-duo-quinque*? Yet the following comparisons show that such identity is quite possible :—

	'Two', 2.	'Four', 2×2.	'Five', 5.	'Nine', 2×2+5.
Sanskrit	*dva, dvi*	*ća-tvâr*	*pańćan*	
Yangaro hep		*aće-ć*	*huć*	*iz-g-in*
Patagonian	*xeu*kay	*ke-ka*guy	*keyżum*	*ke-ka-xeżum*
Quichua	*ys*kay	*tta-hua*	*pić*ka	*ys-k-un*[1]
Unalashka	arlok	*si-khin*	*khaan*	*si-kh-een*
Tesuque	*kihyeh*	*ion-ouh*	*pahnouh*	*ku-a-enouh*
Attakapa	happalst	*że-ż*	nilt	*te-gghuia-e*
Kioway	*gia*	*ia-ki*	*onto*	*coh-ż-u*
Netela	*wehe*	*wa-ża*	mahar	*pehe-l-enga*
Sekumne	*pen*	*żi*	mauk	*mu-ż-um*[2]
Pujuni	*teene*	*pehe-l*[3]	mustik	*mo-ż-um*
Mongolian	*khoyar*	turban	tebun	*yi-s-un*
Tuschi	*shi, shin*	*dhe-w*	phkhi	*i-ss*
Singpho	nkhoñ	me*li*	maña	*że-kh-u*
	onkhoñ	me*li*	meña	*tie-kh-o*
Turkish	ihi	*tör-t*	beis	*to-h*-os
	iki	*dör-t*	besh	*do-k*-us[4]

[1] In resolving *ys-k-un*, as here, into 'two-two-five', the vowel of the last syllable might belong, as also in the parallels beneath, to the second 'two', and not to the 'five'.

[2] For *mu-*, 'two', see *ante*, pp. 19, 21.

[3] *Pehel*, 'four', is found two lines above, in the Netela *pehel*-enga, 'nine'.

[4] Observe how the Turkish 'fives' can supply the *s* terminations here;

	'Two', 2.	'Four', 2×2.	'Five', 5.	'Nine', 2×2+5.
Tshuvash	ikke	*dwa-tta*	pilik	*tu-kh*-ur
Timbuktu	ahiñka	*ata-ki*	igu	*ya-g-a*
Tungusian	*ǵur*	*dy-gyn*	tunga	*ye-g-in*
	dyul	*du-ye*	tonsa	*khu-y-u*
Ude	*pha*	*bi-p*	kho	*wu-i*
Talatui	*oyo*-ko	*oi-ssu*ko	*kasa*ko	*oo-i*
Siamese	*soñ*	*si*	há	*ka-u*
Chinese	*ár*	*sze*	wu	*ki-u*
	i	*sze*	'ñ	*ka-u*
Burmese	nhach[1]	*le*	ña	*ko*

The transition is easy from the Tesuque *kuaenouh* to the Chinese *kau*, 'nine', through the Skwali *khoun*, 'nine', and the Tungusian 'nines', *uyun* and *khuyu*, or *uyen* and *huyu*; and also from the Quichua *yskun*, 'nine', to the Mongolian and Tungusian 'nines', *yisun* and *yegin*, with the Unalashka *sikheen* in the Aleutian Islands, the stepping-stones between the Old and the New Worlds. Were it not beyond the scope of these pages, and unnecessary besides, as the work has been already done far better than I could do it, much evidence might be adduced in favour of the derivation of the Americans from Eastern Asia, in addition to that with which the analysis and comparison of numerals has now supplied us. This additional evidence may be found by anyone in Prescott, from whom I will only cite a few passages, to show how the two lines of evidence converge to the same point. Take, for instance, the following quotation which he gives from Humboldt in reference to the physical character of the Americans:—

an additional argument for the resolution of these 'nines' into 'two-two-five'.

[1] With an initial *n two*, like this or the Nepalese *ni*, the Aryan 'nine', *na-v-an*, might be reduced to 'two-two-five'. But Sarmatian 'nines', like the Lithuanian *de-w-yni*, have *d* instead of *n*.

"On ne peut se refuser d'admettre que l'espèce humaine n'offre pas de races plus voisines que le sont celles des *Américains*, des *Mongols*, des *Mantchoux*, et des *Malais*."

This is quite in accordance with the following 'nines', mostly taken from the lists above, to say nothing of other numerals :—

American.	Mongolian.	Mantshu.	Malay.
sikheen	*yisun*	*yegin*	*siyam*
yskun	*yeso*	*uyun*	*tihu*
teggluiae	*yese*	*khuyu*	*tiva*
tookhu		*huyu*	*siva*
cohżu			*hiva*
ooi			*iva*

It must, however, not be forgotten, that these linguistic coincidences extend to some African nations also, as will have been seen from the lists of 'nines'. In confirmation of what Humboldt has said of the physical character of the Americans in general, we may take what Prescott himself says of the manners, customs, and institutions of the ancient Mexicans, in the Appendix to his History :—

"The probability of such a communication, especially with Eastern Asia, is much strengthened by the resemblance of sacerdotal institutions, and of some religious rites, as those of marriage, and the burial of the dead; by the practice of human sacrifices, and even of cannibalism, traces of which are discernible in the Mongol races; and, lastly, by a conformity of social usages and manners, so striking, that the description of Montezuma's court may well pass for that of the Great Khan's, as depicted by Maundeville and Marco Polo."

The following resemblance has been frequently mentioned; but it is so significant that I must notice it once more :—

"A proof of a higher kind is found in the analogies of

science. We have seen the peculiar chronological system of the Aztecs; their method of distributing the years into cycles, and of reckoning by means of periodical series, instead of numbers. A similar process was used by the various Asiatic nations of the Mongol family, from India to Japan. Their cycles, indeed, consisted of sixty, instead of fifty-two years; and for the terms of their periodical series, they employed the names of the elements, and the signs of the zodiac, of which latter the Mexicans, probably, had no knowledge. But the principle was precisely the same.

"A correspondence quite as extraordinary is found between the hieroglyphics used by the Aztecs for the signs of the days, and those zodiacal signs which the Eastern Asiatics employed as one of the terms of their series. The symbols in the Mongolian calendar are borrowed from animals. Four of the twelve are the same as the Aztec. Three others are as nearly the same as the different species of animals in the two hemispheres would allow. The remaining five refer to no creature then found in Anahuac. The resemblance went as far as it could. The similarity of these conventional symbols, among the several nations of the East, can hardly fail to carry conviction of a common origin for the system, as regards them. Why should not a similar conclusion be applied to the Aztec calendar, which, although relating to days, instead of years, was, like the Asiatic, equally appropriated to chronological uses, and to those of divination?"

It is the Mexicans who are connected by these symbols and by their calendar with the Mongolian or Yellow Race. A similar link for the Peruvians may be supplied by their *quipus*, "which," says Prescott, "must be allowed to bear some resemblance to the belts of wampum—made of coloured beads strung together—in familiar use among the North American tribes, for commemorating treaties, and for other

purposes".[1] These knotted cords of the Peruvians performed for them, however imperfectly, the services of our arithmetical figures and alphabetical characters; although they were, "doubtless, a wretched substitute for the alphabet, . . . and far below the hieroglyphics, and even the rude picture-writing of the Aztecs." The ancestors of the Chinese would seem to have used a similar substitute for writing before the invention of their present syllabic characters:—

"While the relics of hieroglyphic writing are so scarce that they barely suffice to prove that it was ever practised in China at all; there is on the other hand a tradition recorded by the followers of Confucius (not by Confucius himself, as is vulgarly supposed) in the classic of Changes, that knotted cords were used in the administration of government before the sages invented writing; and this tradition can hardly be called in question, seeing the same practice was found actually existing among the Peruvians."[2]

All this supplementary evidence, which has been briefly noticed in the last few pages, and which relates to physical character, manners, customs, and science, falls in remarkably with the evidence derived from numerals, which we have now almost exhausted. It will, in fact, be completed, when we have considered the numeral 'six', the last of the ten members of the decade which remains to be compared and analysed.

Six.

The Quichua 'six', *sokta*, has many parallels, as below; but they cannot all be identified together:—

[1] The *quipus*, i. e., 'knots', "might be regarded as the Peruvian system of mnemonics"; and thus remind us of our own habit of tying a knot in a handkerchief.

[2] Chalmers, *Origin of the Chinese*, p. 5.

'Six.'

Quichua *sokta*
Tesuque (New Mexico) *sih*
Annamitic *sau*
Khyeng (Arracan) *sauk*
Burmese *khyauk*
Siamese *hok*
Ahom (Assam) *ruk*
Chinese *luk*
luh
Nepalese *ruk*
ruk-ka (suffix)
tuk
tuk-ći (suffix)
tuk-ya (suffix)[1]
tu
re
khu
ćah
Tibetan *thu*
Circassian *shu*
Basque *sei*
Aryan *sè*
sex
shash
achsaz
khsvas
weẍ
whe
Iroquois *yei*
yahyook
yahiak
achiak

[1] Compare these suffixes with the supposed Quichua suffixes, *-ka*, *-kay*.

'Six'.

Sioux *ahkewe*
shahpai
Houssa *shida*
Bode (Bornu) *zdu*
Kandin (N.W. of Bornu) *shishes*
Berber *sedis*
Syriac *sheth*
Hebrew *shêsh*

'Six' is commonly resolvable into 'five+one', or 'one+five', but sometimes into 'three × two', or 'two × three'. If we resolve the Quichua *sok-ta*, 'six', into 'five+one', it might be identified with the Opatoro (Honduras) *saihe-ita*, 'five-one'. *Sok-* would then be 'five', and its affinities will have been given above (pp. 10, 11). Those of *-ta*, 'one', will be found below :—

'One'.

Quichua *-ta*
St. Miguel (California) *tohi*
Pujuni (California) *ti*
Opatoro (Honduras) *ita*
Caraho (Brazil) *ita*
Natchez (Mississippi) *witahu*
Uchee (Florida) *sah*
Malay *sa*
aisa
Polynesian *ta*
tahi
Circassian *zi*
Tuschi *żha*
Lesgi *zo*
Ude *sa*

Our survey and analysis of the Quichua numerals are now finished; and it only remains to indicate the conclusions

which readers will probably have drawn during the progress of the examination. The Quichua numerals, then, plainly connect the ancient Peruvians with the nations of the Old World; their nearest kindred there appearing to be the Turanians, especially those of the Yellow Race. But the connection of the Peruvians with the Americans in general is still closer than that with the Turanians: and, if it were required to point out any particular American nations as coming nearest to the Quichua in the largest number of numerals, the Tesuque of New Mexico, and the Kioway of New Mexico and Texas, might be selected from the rest, although the identity in numerals may frequently be hardly perceived without recurring to the previous analysis. I conclude, however, this chapter on numerals by placing the three decades side by side, and add to them the Patagonian decade:—

	South America.		North America.		
	Quichua.	Patagonian.	Kioway.	Tesuque.	
I.	*huk*	*cheuquen*	*pahko*	*guih*	
II.	*y*skay	*xeu*kay[1]	*gia*	*kihyeh*	
III.	*kimsa*	*keash*	*pao*	*pohyeh*	1+2.
IV.	*ttahua*	*keka*guy	*iaki*	*ionouh*	2×2.
V.	*pić*ka	*keyżum*	*onto*	*pahnouh*	
VI.	*sokta*	wenecash[2]	mosso	*sih*	
VII.	*kanćis*	*kuka*	*panża*	*ćae*	5+2.
VIII.	*pussak*	*wenekekague*	*iaża*	*kuhbeh*	2×2×2.
IX.	*yskun*	*kekaxeżum*	*cohżu*	*kuaenouh*	2×2+5.
X.	*ćunka*	*xaken*	*cokhi*	*taheh*	

[1] In these Patagonian numerals, *x* is the Spanish *x*, and therefore equivalent to a German *ch*.

[2] As already noticed, *wenecash*, 'six', =2×3, as *wenekekague*, 'eight', =2×4.

CHAPTER III.

QUICHUA AND AMERICAN AFFINITIES, AS DEDUCED FROM PERSONAL PRONOUNS AND WORDS OF FAMILIAR USE—AMERICAN, TURANIAN, AND IBERIAN AFFINITIES OF THE ANCIENT LYCIAN, AS EXHIBITED IN BILINGUAL INSCRIPTIONS.

As in numerals, so in personal pronouns, the nearest parallels to the Quichua are to be found in America itself, and the next among the Turanians and Iberians, while the Aryan and the Semitic parallels are more remote. This will be seen clearly from the following table:—

	'I.'	'Thou.'	'He.'
AMERICA———QUICHUA	*ñoka*	*kam*	*pay*
Achagua (Venezuela)	*niya*	*kiya*	*piya*
Cree (Algonkin)	*neya*	*keya*	*weya*
Ojibway (Algonkin)	*nen*	*ken*	*wen*
Old Algonkin	*nir*	*kir*	*wir*
Kioway (Texas)	*no*	*am*	*kin*
Tesuque (New Mexico)	*nah*	*uh*	*ihih*
Cahuillo (New Mexico)	*neh*	*eh*	*peh*
Netela (California)	*no*	*om*	*wanal*
Weitspek (California)	*nek*		
Sahaptin (Oregon)	*in*	*im*	*ipi*
Wallawalla (Oregon)		*su*	*ipin*
Chinook (Oregon)	*naika*		
Hailtsa (New Caledonia)	*nuka*	*żu*	
Takulli (New Caledonia)		*yin*	
Winebago (Sioux)	*neeah*		
Mohawk (Iroquois)	*ni*		
Creek (Florida)		*chameh*	
Taino (Hayti)	*ni, mi*	*ti*	*hi, hin*
OLD WORLD—Georgian	*me*	*shen*	*igi*
Basque	*ni*	*hi, zu*	

	'I.'	'Thou.'	'He.'
Fin	*mina*	*sina*	*han*
Turkish	*ben*	*sen*	*o*
Burmese	*ña*	*then*	
Chinese	*ño*		
Takpa (E. Tibet)	*gne*	*i*	*pe*
Pakhya (Nepal)	*ma*	*ta*	
Gurung (Nepal)	*gna*	*ken*	
Santali (India)	*iñ*	*am*	*huni*
Sanskrit		*tvam*	
Hebrew	*anochi*		
Egyptian	*anok*		

After numerals and personal pronouns, there come, as the third branch of evidence, a number of those words in a language which are least likely to be lost or changed for others in the lapse of ages, and which are therefore usually selected for comparison in inquiries relating to the primitive affinities of nations. Of such words there will here follow twenty-seven, which are:—'Man', 'woman', 'head', 'hair', 'eye', 'nose', 'mouth', 'tongue', 'ear', 'hand', 'foot', 'bone', 'blood', 'sun', 'moon', 'star', 'sky', 'day', 'night', 'fire', 'water', 'tree', 'stone', 'egg', 'bird', 'fish', 'ant'.

We commence with the first two of these words, 'man', and 'woman', which will occupy us a long time: for terms similar to those used in America are found wherever mankind exists, and some even in the language of the extinct Lycian nation; a circumstance which will justify a short digression on that ancient people, whose speech differed so remarkably from the Thracian tongues on the other side of Mount Taurus, such as the Lydian and Phrygian, with the kindred Armenian. In dealing with the Lycians, we have probably to deal with a Pre-Aryan population in Asia Minor, such as the Basques are in Spain, and the Pelasgians, as I think, were in Italy and Greece.

Man, Woman.

American, N. and S.	Turanian, etc.
Quichua, S. *runa*, 'man'.	Gyami *rin*, 'man'.
Oregones, S. *erigno*, 'woman'.	Shina *grin*, 'woman'.
Delaware, N. *lenno*, 'man'.	Toungh-thu *lan*, 'man'.
St. Miguel, N. *tlene*, 'woman'.	Khyeng *klañ*, 'man'.
Kiriri, S. *renghe*, 'husband'.	
Mohawk, N. *roñwe*, 'man'.	Malay *orañ*, 'man'.
hoñwee, 'woman'.	Japanese *onna*, 'woman'.
Oneida, N. *loñwe*, 'man'.	Malay *langai*, 'man'.
yoñwee, 'woman'.	Rotuma *hani*, 'woman'.
Iquito, S. *icouan*, 'man'.	Siamese *khon*, 'man'.
Onondaga, N. *haiñwe*, 'man'.	Mongolian *khuñ*, 'man'.
Tuscarora, N. *aineehau*, 'man'.	Papuan *iohanouw*, 'man'.
Masacara, S. *iñniuh*, 'man'.	Kurile *ainuh*, 'man'.
Pacaguara, S. *uni*, 'man'.	*ainu*, 'man'.
Sapiboconi, S. *anu*, 'woman'.	Budugur *kennu*, 'woman'.
Yagua, S. *huano*, 'man'.	Tasmanian *penna*, 'man'.
Omagua, S. *huaina*, 'woman'.	Irular *ponnu*, 'woman'.
Taino (Hayti) *guani*, 'man'.	Sandwich I. *kanaka*, 'man'.[1]
Kioway, N. *kiani*, 'man'.	Kamtshatkan *käñge*, 'man'.
Guarani, S. *cugna*, 'woman'.	Solomon I. *kene*, 'woman'.
Saraveca, S. *ećeena*, 'man'.	
Micmac, N. *ćinem*, 'man'.	Chinese *ǵin*, 'man'.
Carib, S. *yon*, 'man'.	*yan*, 'man'.
Otuke, S. *vuani*, 'man'.	*pin*, 'woman'.
vuaneti, 'woman'.	Guebe *pine*, 'woman'.

[1] The *kana*-ka, 'man', of the Sandwich Islands, is = Tanema *ranu*-ka, 'man' (cf. Quichua *runa*, 'man'). The terminations, *-ka*, *-me*, of the Tanema (Nitendi Group) ranu-*ka*, 'man'; and rani-*me*, 'woman', may be explained from the Tibetan *khyo*, 'male', and *mo*, 'female'.

American, N. and S.	Turanian, etc.
Cocomaricopa, N. } *seniact*, 'woman'.	Guebe *syniat*, 'man'.
Cuchan, N. *sinyak*, 'woman'.	Tablung Naga } *sauniak*, 'man'.
Guana, S. *zeeno*, 'woman'.	
Cauixana, S. *zyna*, 'man'.	
Dieguno, N. *sun*, 'woman'.	
Yuracares, S. *sugne*, 'man'.	Changlo *soñgo*, 'man'.
Pujuni, N. *çune*, 'man'.	Singpho *siñpho*, 'man'.
Takulli, N. *dini*, 'man'.	Dhimal *dian̄*, 'man'.
Itenes, S. *tana*, 'man'.	Javanese *tiyañ*, 'man'.
Cayus, N. *yuant*, 'man'.	Australian *yuen*, 'man'.
Mexican, N. *uinik*, 'man'.	
Maya, N. *inik*, 'man'.	
Labrador, N. *inuit*, 'man'.[1]	
Mongoyos, S. *hoiema*, 'man'.	Ostiak *kuim*, 'man'.
Coroado, S. *guaima*, 'man'.	Georgian *gwami*, 'person'.
Apiaca, S. *coui-mahe*, man'.	*qoma*, 'young man'.[2]
Oregones, S. *comai*, 'man'.	Kumi *kumi*, 'man'.
Peba, S. *como*ley, 'man'.[3]	Kami *kami*, 'man'.
Sahaptin, N. *hama*, 'man'.	Khari Naga *ami*, 'man'.
Itonama, S. *umo*, 'man'.	Sibsagar Miri *amme*, 'man'.
Miranha, S. *thimae*, 'man'.	Angami Naga *theme*, 'man'.
St. Xavier, N. *tämma*, 'man'.	Ancient Egyptian } *temmu*, 'men'.
Iquito, S. *item*, 'woman'.	Coptic *shimi*, 'woman'.

[1] The fuller forms of such words for 'man' as *uinik*, *inik*, and *inuit*, seem to be found a little above, in the New Mexican *sinyak* and *seniact*, 'woman'; in the Guebe (Papuan) *syniat*, 'man'; and in the Tablung Naga (Burmah-Assam) *sauniak*, 'man'.

[2] Also written *qma*, as well as *qoma*. Compare the Teutonic words for 'man', *guma*, *gumo*, *komo*, etc. (Diefenbach, *Lex. Comp.*)

[3] For *-ley*, see below, at the end of the list.

AMERICAN, N. AND S.	TURANIAN, ETC.
Zapara, S. *itiuma*, 'woman'.	Ude *shumak*, 'woman'.[1]
Yarura, S. *pumme*, 'man'.[2]	Celebes *tuama*, 'man'.
Willamet, N. *pummaike*, 'woman'.	Kohatar *pummage*, 'woman'.
QUICHUA, S. *huarmi*, 'woman'.[3]	Magar *bharmi*, 'man'.[4]
Coretu, S. *er*meu, 'man'.	Turkish *er*, 'man'.[5]
Pima, N. *hahri*, 'woman'.	Mongolian *ere*, 'man'.
Tupi, S. *uara*, 'man'.	Kuri *koro*, 'man'.
Coroado, S. *uare*, 'father'.	Accadian *kara*, 'man'.
QUICHUA, S. *kkari*, 'man'.	Talain *karu*, 'man'.
Taino (Hayti) *cari*, 'man'.	Gohuri *gohur*, 'man'.
Came, S. *gre*, 'man'.	Kurile *guru*, 'man'.
Carib, S. *oquiri*, 'man'.	Australian *uire*, 'man'.
	kure, 'man'.
	giwir, 'man'.
	gibir, 'man'.[6]
	Samoyed *hüberi*, 'man'.
	hüweri, 'man'.
	hâsawa, 'man'.
	keiza, 'man'.
	Santali *horh*, 'man'.

[1] Cf., *supra*, the Cuchan *sinyak*, 'woman'.

[2] Cf., *supra*, the Tasmanian *penna*, 'man'.

[3] Akin to *hua*-rmi, 'woman, wife', would be two other Quichua words, *hua*-rma, 'son', and *hua-hua*, 'child, grandchild', with which Lopez compares *υἱός*, and the Irish *ua*. In Chinese we have *hoi*, 'child', and in Honduras the Intibuca *hua* and the Opatoro *gua-gua*, 'boy'.

[4] Compare *-mi* with the Tibetan *mi* and the Californian (Soledad) *mue*, 'man'.

[5] Aryan parallels to this and several previous terms will doubtless have occurred to the reader: such, for instance, as the Gaelic *fear*, 'vir'; *duine*, 'homo'; and *bean*, 'femina'.

[6] Cf. Hebrew *geber*, 'man'.

American, N. and S.	Turanian, etc.
Quichua, S. *kosa*, 'husband'.[1]	Santali *koḍa*, 'man'.
Cayuvava, S. *jaẓi*, 'man'.	Georgian *każ̇i*, 'man'.
Yagua, S. *huata*runia, 'woman'.	Yeniseian *ket*, 'man'.
Pima, N. *huth*, 'man'.	*hit*, 'man'.
Taino (Hayti) *hito*, 'man'.	Japanese *hito*, 'man'.
	Basque *giz*on, 'homo'.
	*giz*ar, 'vir'.[2]
	kożo, 'male animal'.
	Madia *gaita*, 'man'.
	Madi *koit*ar, 'man'.
Araucanan, S. *che*, 'man'.	Lesgi *će*, 'man'.
Aymara, S. *hake*, 'man'.	*heka*, 'man'.
Canamirim, S. *chechü*, 'man'.	Permian *aika*, 'man'.
	Rukheng *youkkya*, 'man'.
Fuegian, S. *oha*, 'man'.	Kurile *okkai*, 'man'.
	Khond *lokka*, 'man'.
Arawak, S. *lukku*, 'man'.	Gadaba *lokko*, 'man'.
Coroado, S. *laiya*, 'white man'.	Malay *laki*, 'man'.
St. Miguel, N. *loai*, 'man'.	*lahi*, 'man'.
Kiriri, S. *klöh*, 'man'.	*loh*, 'man'.
Peba, S. como*ley*, 'man'.[3]	*ulu*, 'man'.
Quichua, S. *runa*, 'man'.	*urun*, 'man'.
Kenay, N. *tinna*, 'man'.	*tona*, 'man'.
Opatoro, N. *taho*, 'man'.	*tau*, 'man'.

Several American and Turanian terms of the above kind have parallels in Africa, as in the following cases:—

[1] Cf. Angola *kashi*, 'wife'; Bayeiye *kazi*, 'woman'; etc.
[2] In Basque, *ar* is 'male'.
[3] For *como-*, see *ante*, p. 54, note 3.

AFRICAN.	AMERICAN, TURANIAN, ETC.
Hottentot *t'kohn*, 'man'.	Siamese *khon*, 'man'.
quorque, 'man'.	Bhumij *horro*, 'man'.
Yoruba *okori*, 'man'.	Carib *oquiri*, 'man'.
Wolof *gor*, 'man'.	Kuri *koro*, 'man'.
Timbuktu *har*, 'man'.	Santali *horh*, 'man'.
Faslaha *ira*, 'man'.	Mongolian *ere*, 'man'.
garwa, 'man'.	Australian *kure*, 'man'.
Barba *kuro*, 'woman'.	Pima *hahri*, 'woman'.
*toñ*kuro, 'woman'.	Itenes *tana*, 'woman'.
Gio *doñ*, 'woman'.	Correguage *dome*, 'woman'.
Dikele *thomi*, 'man'.	Angami Naga *theme*, 'man'.
Accrah *bomma*, 'man'.	Yarura *pumme*, 'man'.
Soso *kame*, 'man'.	Kami *kami*, 'man'.
hame, 'man'.	Sahaptin *hama*, 'man'.
Kikamba *ume*, 'man'.	Itonama *umo*, 'man'.
Yala *onya*, 'woman'.	Japanese *onna*, 'woman'.
Agaumidr *hona*, 'woman'.	Omagua *huaina*, 'woman'.
Gura *ǵon*, 'woman'.	Camacan *ać̀oun*, 'woman'.
Toma *asonu*, 'woman'.	Moxos *eseno*, 'woman'.
zunu, 'man'.	Pujuni *sugne*, 'man'.
Okam *koano*, 'woman'.	Apiaca *cogna*, 'woman'.
Boko *go*, 'man'.	Araucanan *che*, 'man'.
Bornu *koa*, 'man'.	Fuegian *oha*, 'man'.
koañga, 'man'.	Kioway *kiani*, 'man'.
kañgoa, 'man'.	Kamtshatkan *käñge*, 'man'.
Waag *yehona*, 'woman'.	Seneca *yehoñ*, 'woman'.
Landoro *hi*, 'man'.	Bodo *hiwa*, 'man'.
hiñga, 'man'.	Mongolian *khuñ*, 'man'.
Landoma *oruni*, 'man'.	QUICHUA *runa*, 'man'.
orani, 'woman'.	Oregones *erigno*, 'woman'.

AFRICAN.	AMERICAN, TURANIAN, ETC.
	Yagua huata*runia*, 'woman'.[1]
Mbarike *urom*, 'man'.	Malay *orañ*, 'man'.
Bayeiye *rume*, 'man'.	Georgian ch*rmi*, 'husband'.
Limba *yereme*, 'woman'.	QUICHUA *huarmi*, 'woman'.
	guarmi, 'woman'.
Gadsaga *yahare*, 'woman'.	Arawak *hiaru*, 'woman'.
reme, 'son'.	QUICHUA *huarma*, 'son'.
Boko *yiruma*, 'son'.	Georgian *qrma*, 'son'.
gme, 'person'.	*gwami*, 'person'.

It is certainly curious, and probably more than merely curious, that the Quichua *huarmi*, 'woman, wife', and *huarma*, 'boy, son', should find such near parallels in Africa as the Limba *yereme*, 'woman', and the Boko *yiruma*, 'son'; the Limba being spoken near Sierra Leone, and the Boko near Boussa on the Lower Niger. Nor are the parallels less remarkable between the Quichua *huarma* and the Georgian *qrma*, 'son', and between the Quichua *huarmi*, 'wife', and the Georgian *chrmi*, 'husband'; more especially if we go on to analyse the words in question, which exhibit signs of being made up of three elements, each element possibly indicating some phase of humanity. One of these 'man' elements would be a *q* or *qu* element; the second an *r* element; and the third an *m* or *n* element. The first and last of these elements would then be found in the Apiaca (Brazil) compound *coui-mahe*, 'man'; the first and second

[1] For *huata-*, see *ante*, p. 56. The Yagua *huata-runia*, 'woman', i.e., 'wife-man', may be compared with the Bayeiye (African) *kazi-rume*, 'woman-man', where *kazi* = Angola *kashi*, 'wife', and *rume* may = Quichua *runa*, 'man'.

in the Quichua *kkari*, 'man'; and the second and third in the Quichua *runa*, 'man'. But, however this may be, and whatever be the mode in which the following words took form, their resemblance is, at least, such as deserves that some attention should be paid to it :—

ASIA.

Tibetan *khyo*, 'vir'. *mi*, 'homo'.
Turkish . . *er*, 'vir'.
Georgian . . *eri*, 'people'.
gv ——— *ari*, 'family'.
qu ——— *ari*, 'surname'.
gwa ——— *mi*, 'person'.
go ——— *mi*, 'family'.
qo ——— *ma*, 'young man'.
q ——— *ma*, 'young man'.
q ——— *mi*, 'step-father'.
q ——— *r* ——— *ma*, 'son'.
ch ——— *r* ——— *mi*, 'husband'.

SOUTH AMERICA.

Apiaca *coui* . . - . . *mahe*, 'vir'.
Botocudo *uaha*, 'vir'.
Tupi *ua* ——— *ra*, 'homo'.
Coroado *ua* ——— *re*, 'father'.
Coeruna *üai* ——— *me*, 'man'.
Oregones *co* ——— *mai*, 'vir'.
Coroado *guai* ——— *ma*, 'homo'.
Mongoyos *hoie* ——— *ma*, 'man'.
Quichua *hua* ——— *r* ——— *ma*, 'son, boy'.
hua ——— *r* ——— *mi*, 'wife'.

The following parallels lead in a similar manner from South America up to the Caucasus, and advance thence a step further, so as to include Lycia; a sufficient test for the propriety of such inclusion being supplied by bilingual in-

scriptions in Lycian and Greek, few and short as those inscriptions are. The first South American word which will be cited, the Peba *comoley*, contains yet another expression for 'man', *-ley*, as a final, in addition to *como-*, 'man',= Oregones *comai*, 'man', etc.

SOUTH AMERICA.

Peba como*ley*, 'man, vir'.
Kiriri *klöh*, 'man'.
Curetu *láaáe*, 'man'.
Coroado *laiya*, 'white man'.
Arawak *lukku*, 'man'.
Aymara *layka*, 'mother'.

NORTH AMERICA.

St. Miguel (California) *loai*, 'man'.

MALAY.

Timor *loh*, 'man'.
Guaham *lahi*, 'man'.
Madura *laki*, 'man'.
Wokan *lesi*, 'man'.

INDIAN.

Khond *lokka*, 'man'.
Gadaba *lokko*, 'man'.

ACCADIAN.

luku, 'mother'.

CAUCASUS.

Ossetic *lak*, *lag*, *läg*, 'homo, vir'.
lagyiy, *lädyiy*, 'hominis, humanus'.
Abkhasian *lkhaẓa*, 'husband'.
Circassian *tleh*, 'husband'.
Lesgi *less*, 'husband'.
tlyadi, 'wife'.

LYCIAN.

Epitaph at Limyra *lade*, '*γυναικί*'.

These analogies between the languages of the Old and the New World may be pursued still further, and with like results. In those examples which now follow, 'man' and his 'house' appear to have an etymological connection with each other, as in the Zapara (Ecuador) *itia*, 'house', *itiuma*, 'woman, etc.: compare *husband* and *huswife*, *domus* and *dominus*:—

AMERICA, N. AND S.	OLD WORLD.
Omaha, N. *tee*, 'house'.	
Pujuni, N. *he*, 'house'.	
Tecuna, S. *hi, y*, 'house'.	
Curetu, S. *uee*, 'house'.	Chinese *uh*, 'house'.
Tucano, S. *wii*, 'house'.	Japanese *iye, ihe*, 'house'.
Jupua, S. *wui*, 'house'.	
Chibcha, S. *güe*, 'house'.	
Otomi, N. *ku*, 'house'.	Yeniseian *hu*, 'house'.
Takulli, N. *kukh*, 'house'.	*hukut*, 'house'.
Patagonian, S. *coća*, 'house'.	*khush*, 'house'.
Talatui, N. *koǵa*, 'house'.	Basque *eche, iche*, 'house'.
Tupi, S. *oca*, 'house'.	Georgian *chokhi*, 'cottage'.[1]
QUICHUA, S. *huasi*, 'house'.	Hungarian *hâz*, 'house'.
Shasti, N. *uma*, 'house'.	Nepalese *yum*, 'house'.[2]
Coropo, S. *sheh-me*, 'house'.	Toungh-thu *sam*, 'house'.
Guayacuru, S. *dimi*, 'house'.	Nepalese *dhim*, 'house'.[3]
	tim, 'house'.
	khim, 'house'.

[1] *Ch* is here an aspirate; but in Basque it is the English and Spanish *ch*.

[2] Compare this and the preceding word for 'house', with our *home* and *house*.

[3] Cf. *domus*.

America, N. and S.		Old World.
Mura, S.	*cahaiñ*, 'house'.	Gyarung *ćhem*, 'house'.
Chepewyan, N.	*cosen*, 'house'.	Nepalese *ćen*, 'house'.
Botocudo, S.	*tiemm*, 'house'.[1]	Accadian *tem*, 'house'.
	kjiemm, 'house'.	Tibetan *khyim*, 'house'.
	kijaîme, 'house'.	Georgian *gomi*, 'family'.
	[a family'.	*gwami*, 'person'.[2]
	kijaima, 'to have	
Came, S.	*coxim*, 'son'.	
Guayacuru, S.	*couttamo*, 'son'.	Japanese *kodomo*, 'child'.
Tupi, S.	*counomi*, 'child'.	
	columi, 'little'.	
Patagonian, S.	*calum*, 'child'.	Albanian *dyelym*, 'boy'.[3]
	tudem, 'little'.	Burmese *thathami*, 'child'.
Galibi, S.	*tigami*, 'child'.	Lycian *tedêeme*, '*υἱός*'.

These expressions for 'child', 'son', 'boy', thus represented in South America by such words as *cou-ttamo*, *calum*, and *ti-gami*, and in the Old World by the Japanese *ko-domo*, the Burmese *tha-thami*, the Lycian *te-dêeme*, and (probably) the Albanian *dye-lym*, are to be resolved into two elements. The first of these elements is to be discerned in the Japanese *ko*, 'child', the Burmese *tha*, 'son', the Georgian *ʒe*, 'son', the Ancient Egyptian *sa*, 'son', and the Chinese *tsz'*, 'son, child', a word signifying also 'to bear, to produce'. 'Progeny' would thus be the original meaning of the first element in such compound words for 'son' and 'child'; and the second element, indicating the 'human'

[1] In *bacan-tiemm*, 'nest', = 'bird-house' (see *infra*, s. v. 'bird').

[2] Compare *gwami* with the second element, and the Tucano *wii*, 'house', with the first element, in the familiar Ojibway word, *wi-gwam*, 'house', i.e., 'abode of man', = Botocudo *ki-jaîme*, etc.

[3] The nom. sing., *dyallyë-i* or *dyalyë-i*, makes in the nom. plur. *dyelym-të* and *dyem-të*. The Albanian *ly* = Italian *gl*.

progenitor or progenitrix of this 'progeny', might be 'person', 'man', 'woman', 'husband', 'wife', 'father', or 'mother', as may be seen by the following analysis:—

AMERICA, N. AND S.

Apiaca, S. . . .	*coui-mahe*, 'man'.
Coroado, S. . . .	*guaima*, 'man'.
Coeruna, S. . . .	*üaime*, 'man'.
	jame, 'old man'.
Tupi, S. . . .	*uaimi*, 'old woman'.
Maya, N. . . .	*uæum*, 'woman'.
Capoxo, S. . . .	*ashem*, 'mother'.
Cayapo, S. . . .	*usum*, 'father'.
Zapara, S. . . .	*itiuma*, 'woman'.
Iquito, S. . . .	*item*, 'woman'.
St. Borgia, N. . . .	*iham*, 'father'.
	tama, 'man'.
Miranha, S. . . .	*thimae*, 'man'.
Eudeve, N. . . .	*dohme*, 'people'.
Correguage, S. . . .	*dome*, 'woman'.
Curetu, S. . . .	*nomi*, 'woman'.
Chavante, S. . . .	*juma*, 'father'.
Kutani, N. . . .	*cahmah*, 'mother'.
Navaho, N. . . .	*shema*, 'mother'.
Tecuna, S. . . .	*temahe*, 'mother'.

OLD WORLD.

Fiji . . .	*tama*, 'father'.
Gyarung . . .	*tomo*, 'mother'.
Angami Naga . . .	*theme*, 'man'.
Deoria Chutia . . .	*żima*, 'mother'.
Tibetan . . .	*zami*, 'man, vir'.
	zama, 'woman'.
	khyomo, 'wife'.

Japanese *ko*, 'child'. *yome*, 'wife'. *ko*, 'child'.

ko ————*domo*, 'child'.

Old World.

Egyptian *sa*, 'son'.	*temmu*, 'men'.	*sa*, 'son'.
Accadian . . .	*gum*, 'man'.	
Sanskrit *sû*, 'parĕre'.[1]	. . . . .	*sû*, 'parĕre'.
Chinese *tsz'*, 'parĕre'.	. . . . .	*tsz'*, 'parĕre'.
Georgian *ẓe*, 'son'.	*gwami*, 'person'.	*ẓe*, 'son'.
	gomi, 'family'.	
African . . .	*gama*, 'woman'.	
	ume, 'man'.[2]	
	omi, 'man.'	
	thomi, 'man'.	
	nomi, 'man'.	
	rume, 'man'.	
	lume, 'man'.	
	lome, 'man'.	
Ossetic *svä*———	*llon*, 'child'.[3]	
Burmese . . .	*leñ*, 'husband'.	
Brahui *ce*———	*lum*, 'brother'.	
	lumma, 'mother'.	
Albanian *dye*---	*lym*, 'boy'.	
Burmese *tha*, 'son'.	*khami*, 'father'.	*tha*, 'son'.
	thami-kheñbwon, 'wife'.[4]	
tha———	*thami*, 'child'.	
Lycian *te*———	*dêeme*, '*υἱός*'.	

America, N. and S.

Galibi, S. *ti*---	*gami*, 'child, little brother'.	

[1] Whence *sûnu*, = English *son*, etc.

[2] Bleek, *Grammar of South African Languages*, p. 193.

[3] The root of *svä-* appears in the Georgian *shv-ili*, 'child', *sh-oba*, 'generation', and *sh-obeli*, 'mother'. We can, perhaps, hardly venture to connect the Etruscan *klan*, 'natus', and the Gaelic *clann*, 'offspring', with the Ossetic *svällon*, etc.

[4] *Kheñ-bwon*, 'spouse'.

AMERICA, N. AND S.

Patagonian, S. *tu*——*dem*, 'little'.
ca——*lum*, 'child'.
Tupi, S. *co*——*lumi*, 'little'.
cou——*nomi*, 'child'.
Guayacuru, S. *cou*——*ttamo*, 'son'.
Came, S. *co*——*xim*, 'son'.
St. Borgia, N. *ui*——*saham*, 'son'.
tama, 'man'.
Coeruna, S. *ae*——*theme*, 'lad'.
Menieng, S. . . . *camu*——*jo*, 'son'.
Curetu, S. . . . *sima*——*gö*, 'son'.
Cobeu, S. . . . *hima*——*ki*, 'son'.
Tucano, S. . . . *yehma*——*cuh*, 'son'.
Mura, S. . . . . *thioma*——*g*, 'lad'.
Tecuna, S. . . . *temaa*——*kan*, 'son'.
temahe, 'mother'.
Chavante, S. . . . *simissi*, 'person'.

The following might perhaps be added:—

CAUCASUS.

Ude . . . *shumak*, 'woman'.
Ossetic . . . *goymag*, 'person'.
sänä——*g*, 'child'.
Tshetsh . . . *kana*——*t*, 'son'.
Tuschi . . . *kna*——*th*, 'son'.

With which compare from above:—

Georgian . . . *gwami*, 'person'. *ze*, 'son'.

Akin to these words would be those that follow, which apparently agree with them in one element, but differ in the other by employing the final member only of such a compound word as the Apiaca *coui-mahe*, 'man':—

California (Soledad) . . . *mue*, 'man'.
Tibetan . . . *mi*, 'man, homo'.
-mo, 'female'.
ma, 'mother'.
Japanese *ko*, 'child'. *me*, 'woman, wife'.
Chinese *tsz'*, 'child'. *mo*, 'female'.
Burmese *tha*, 'son'. *maya*, 'wife'.
tha----------*mi*, 'daughter'.
Georgian *ẓe*, 'son'.
ẓ- ----------*ma*, 'brother'.
Lesgi *ti*----------*mal*, 'son'.
ti----------*mir*, 'son'.
khi ----------*mir*, 'son'.
Tuschi *kho* ----------*mo*, 'männchen'.
Basque *se* ----------*me*, 'son'.
Miranha *sa*----------*mai*, 'lad'.
i----------*ma*, 'brother'.

The preceding seems, upon the whole, the best manner of connecting the two classes of words for 'son' given above: but they might also be brought together as follows:—

Lycian *te* ----------*dêeme*, 'progeny of man'.
Burmese *tha* ----------*thami*.
Japanese *ko*----------*domo*.
South American *cou*----------*ttamo*.
ti----------*gami*.
temaa-kan, 'of man progeny'.
camu--jo.
sima--gö.
hima--ki.
sama--i.
Lesgi . . . *tima—l*.
timi—r.
khimi-r.
Tuschi . . . *khomo*, 'männchen'.

Georgian . . . *qoma*, 'lad, young man'.
Basque . . . *seme*, 'son'.
ume, 'child'.
hume, 'child'.
um-erri } 'lamb' (*ari*, 'ram').
ar-*kume* }
sasi-*kume*, 'bastard' (*sasi*, 'bush').
zar-*kume*, 'sickly child' (*zar*, 'old').

Of the three Basque words here compounded with *kume*, the first, *ari*, 'ram', may be compared with the Latin *ariet-*, the Tuschi *airt*, and the Georgian *verẓi*, which all have the same signification. The second Basque word, *zar*, 'old', is nearly the Armenian *ẓer*, 'old', but has been compared with the Basque *char* (=*ćar*), 'bad', which likewise occurs in Armenian; for, in that language, 'bad' is *ćar*. Finally, the Basque *sasi*, 'bush', differs not much in sense from the Armenian *sêz*, 'grass, herb', apparently = Sanskrit *çâka*, 'herba'; a word that may possibly be recognised in the ancient Dacian, where I have compared *ἀνιασσεξέ*, which Dioscorides gives as the Dacian for *ὀνόβρυχις*, with the Armenian *anyaǧ sêz*, 'unlucky (or mischievous) herb'. The Sanskrit *çâka*, the Armenian *sêz*, and the Dacian *-σεξέ*, remind us of the Basque *seska*, and the Provençal *escha*, 'a rush'; and also of the Quichua *saća*, 'tree', in Georgian *sesh*, and in Tamil *seḍi*. The Georgian *sheshi*, 'wood (lignum)', would be akin to the Georgian *sesh*, 'bois, arbre'; and to the Accadian *gish*, 'arbre, bois', = Tharu *gaćh*.

Returning for the last time to the parallels of the Lycian *tedêeme*, and ranging them in geographical order, we are led as follows from Asia Minor, if not from Albania, to South America:—

Albanian *dyelym*, 'boy'.
LYCIAN *tedêeme*, 'son'. Cf. Accadian *dû*, 'child', *dam*, ['spouse'.
Ossetic *svällon*, 'child'.

Brahui (Biluchistan) } *celum*, 'brother':—i.e., 'child of mother', where *-lum* = Brahui *lumma*, 'mother', = Deoria Chutia (Assam) *żima*, 'mother', = Navaho (New Mexico) *shema*, 'mother', = Tecuna (Brazil) *temahe*, 'mother', = Correguage (New Granada) *dome*, 'woman', = Eudeve (Mexico) *dohme*, 'people', = Miranha (Brazil) *thimae*, 'man', = St. Borgia (California) *tama*, 'man', = Angami Naga (Burmah-Assam) *theme*, 'man', etc.

Burmese *thathami*, 'son'.

Japanese *kodomo*, 'child'.

Guayacuru (Brazil) } *couttamo*, 'son'.

Galibi (Guiana) *tigami*, 'child, little brother'.

Tupi (Brazil) *columi*, 'little'.

Guana (Brazil) *caleihouno*, 'son'.

Patagonian *calum*, 'child'.

tudem, 'little'.[1]

[1] To a different origin must probably be referred the Armenian *doyzn*, 'little'; the Ossetic *tyüsül*, 'little'; the *tüssel*, 'boy', of the Splügen district of the Grisons; the Carian τουσσύλοι, 'πυγμαῖοι'; and the proper name Κά-τουζα, 'πόλις (cf. Ossetic *qay*, 'village') Θρακῆς, ἐν ᾗ κατῴκουν οἱ Πυγμαῖοι'. In my *Asiatic Affinities of the Old Italians*, I have cited these words—to which might be added the *toso*, 'boy', and *tosa*, 'girl' (cf. Quichua *taski*, 'girl'), of Tessin and the Milanese—as a sign of ancient ethnical connection between the aborigines of the Caucasus and those of the Alps; and also the Alpine words for 'avalanche', *laui*, *lauwi*, and

As the Burmese *thathami*, 'son', thus appears identical with the Lycian *tedêeme*, 'son', so also does the Burmese *thami*, 'daughter', seem ultimately the same as the Basque *seme*, 'son', and the Georgian *ẓma*, 'brother' (*ante*, p. 66). Another analogy between the Basque, the Caucasian, and the Burmese, may have been seen earlier in the numeral 'four', in Basque *lau*, in Circassian *tley*, and in Burmese *le* (*ante*, p. 20); all three being apparently corruptions of *two-two*, with an initial *t* or *d* weakened into *l*. At least this seems to me now the best explanation of these numerals, and identifies them with the Tuschi *dhew*, the Quichua *ttahua*, the Etruscan *huth*, the Georgian *oth-*, and the Lesgi *ukh-* and *uk-*, etc.

The following parallels, like those which we have found for the Lycian *tedêeme*, '*υἱός*', and *lade*, '*γυναικί*', tend to ally the Lycians to the Turanians and the Americans:—

South America.

Acroa Mirim *kli*, 'house'.
Cherente *cri*, 'house'.
Chicriaba *gri*, 'house'.
Masacara *pa*, 'house'.
Jumana *pana*, 'house'.
Macuni *pehro*, 'house'.
baan, 'house'.
Came *in*, 'house'.
Kiriri *era*, 'house'.

Whence we may deduce, as completer South American forms for 'house', leaving vowels to be supplied:—

grn, *crn*, or *cln*.
brn or *prn*.

lawine, which are like the Tuschi *law*, 'snow', in the Caucasus, and the Basque *lei*, 'ice', in the Pyrenees. So, too, the Swiss *halde*, 'mountain-side, *côte*', is like the Basque *halde*, *alde*, 'side'.

INDIA.

Madi *lon*, 'house'.
Gondi *ron*, 'house'.
Ahom (Assam) *ren*, 'house'.
Yakha (Nepal) *pañ*, 'house'.

Which give us, as completer Indian forms for 'house', corresponding to the American *cln, crn, grn, brn, prn*:—

pln.
prn.

TIBET.

groñ, 'house, town'.
groñ-pa, 'house, citizen'.
brañ, 'mansion, station'.
bran, 'vassal, slave, subject'.

LYCIA.

prin-êzeyêwe, '*οἰκεῖοι*'.
prin-êze, probably '*οἰκεῖος*'.
prin-afu, '*μνῆμα*.'
prin-afatu, '*ἐποιήσατο*'.

The Lycian *prin-*, if identical with the Assamese *ren* and the Nepalese *pañ*, 'house', would be so ultimately with the kindred Nepalese words for 'house', *tim, dhim, khim, khem, ćen;* also with the Burmese *im, ieñ, señ*, 'house'; and with a number of allied terms which may be found in Dr. Hunter's *Non-Aryan Dictionary*, s.v. 'house'. The Accadian words, *pin*, 'foundation', and a*pin*, 'construction', seem to betray the existence of a similar root in the Pre-Semitic language of Assyria; and with the Lycian *prin*, and the Macuni *pehro*, 'house', etc., we may likewise compare the Ancient Egyptian *pe, per, perit*, 'house', and African words like *pi, pere, perei*, 'house', *perei*, 'village', and *pere*da, 'doorway'. Three other Accadian words are:—

1. *Uru*, 'town, fixed dwelling'. Compare the Basque *uri*, *iri*, *erri*, and the Indian *ur*, *uru*, 'village'.

2. *Aria*, 'river'. Compare the Indian *ar*, *ara*, *aru*, *eru*, 'river'; also the Basque *ur*, 'water', and *euri*, 'rain'.

3. *Uru-d*, 'copper, metal'. Compare the African *aro*, *bire*, *gbere*, *gberu*, 'stone'; the Assyrian *eru*, 'metal'; the Georgian *iara*khi, 'metal', *r-vadi*, 'copper money', *r*-kina, 'iron', thith-*beri*, 'brass', and *ver*-tskhli, 'silver'; and the Basque *urre*, 'gold', *urr-aida*, 'brass', zil-*ar*, 'silver', and *bur*-din, 'iron'. In Africa, 'iron'='black stone'.

To the same class of words for 'dwelling' as the Lycian *prin-*, the Tibetan *brañ*, the Assamese *ren*, the Nepalese *pañ*, *khem*, and *ćen*, and the Burmese *ieñ* and *señ*, would belong also the Georgian *shin*, *shina*, 'within, *chez*', and *shen*-oba or *shen*-eba, 'a building (*gebäude*)', as well as the Armenian *shin*-el, 'to build', and *shên*, gen. *shin*-i, 'dwelling, village'; which last word I have traced, in my *Asiatic Affinities of the Old Italians*, from Sogdiana to Italy, where it emerges in such Etruscan names as *Sena*, Fel-*sina*, and Vol-*sinium*, as it does in the ancient Armenian names reported by Classic authors, *Sana*, *Sinis*, and Elego-*sine*, to which might be added a great number of other Armenian local names. In that previous work of mine, I employed such coincidences as an argument that the dominant race in Etruria belonged, like the Armenians, to the Thracian branch of the Aryan stock; but the same coincidences might obviously be employed, on the other hand, as an argument that the Pre-Aryan population of Etruria, Armenia, and the rest of the region between Mount Imaus and the Tyrrhenian Sea, was Iberian, and akin to the Turanians and the Americans. Not that this last conclusion is at all necessary, even though such words as the Armenian *shên*, 'village', should be admitted to be Scythian, like the Armenian *erku*, 'two'. The language of the United States of America, and the nation that speaks that language, are of

English, and therefore of Teutonic origin, even though the words, *village*, *language*, and *nation*, are of French, and therefore of Latin instead of Teutonic origin. The case may have been similar with the Thracians, who spread from the Caspian to the Tyrrhenian Sea. Armenia would have been their cradle, as a race distinct from the Iranians, their nearest relatives; and in Armenia the word *shên* would have existed, as far as we can judge, from the earliest historical times, just as the word *village* had become English before the United States began to be colonised.

The Lithuanian *sẽna*, 'wall', and *sẽn*-ys, 'building', are clearly allied to the Armenian *shên*, 'village', and *shin*-el, 'to build', and may likewise be originally of Iberian or Scythian origin. Another Iberian word seems to be preserved to us in the termination of Dacian town-names, *-dava*, which I have compared elsewhere with the *Tavium* of Galatia, and with the Georgian *daba*, 'village'; a word very like the Tupi (Brazil) *taba*, 'village' (cf. Quichua *tapa*, 'nest'), as the Basque *eche*, 'house', bears a similar resemblance to the Tupi *oca*, 'village', as well as to the Georgian *chokhi*, 'cottage', the Patagonian *coća*, 'cottage', and other words of the same kind (*ante*, p. 61).

Whether the termination of Dacian town-names, *-dava*, and also the Armenian *shên*, 'village', with all the names into which it enters from Armenia to Etruria, were brought into Europe by the Thracians from Armenia (which I should think was most likely the case with *shên*, but not with *-dava*); or whether they were due to a Pre-Aryan population in those parts; yet both terms would be originally of Iberian or Scythian, and not of Aryan origin. Nor is it only on the line from Mount Imaus to Italy that they may be found, for the following names from Ptolemy will show how they extend from Georgia and Armenia towards the Ganges as well as towards the Tiber, and help to link the Burmese *señ*, 'house', to the Etruscan *Sena* :—

Georgian *daba*, 'village'.
Armenian *shên*, 'village, dwelling'.
Margiana Σίνα or Σήνα.
Aria Ταῦα.
'Αστασάνα, with an "Αστα in Drangiana, another in Bætica, and a third in Liguria.
Καβαρσάνα.
Τριβαζίνα.
Drangiana Φαραζάνα.
Arachosia 'Ριζάνα.
India intra Gangem } Καίσανα, with another in Italy.

These coincidences, insignificant perhaps if they stood alone, yet, when taken in conjunction with the words for 'son', etc. (*ante*, p. 66), and with other evidence, are not to be disregarded as intimations that there was, before the Aryan times, a series of mutually allied nations which occupied the South of Europe and the South of Asia, with the exception of the Semitic area. And this Pre-Aryan population of the South of Europe and Asia would also have had, if we may judge from the words of family relationship given above, nations akin to them in Eastern Asia and in America—particularly in South America.

In the Armenian, the Dacian, the Etruscan, and other Thracian forms of speech, the Iberian element would be subordinate to the Aryan, as the Latin element in English is to the Teutonic: but the Basque and the Lycian, on the other hand, are to be classed as Iberian or Scythian, instead of as Aryan languages. As far as the Lycian is concerned, this will have been already exhibited in the analysis and comparison of the Lycian words, *lade*, '*γυναικί*', and *tedêeme*, '*υἱός*'; and I shall now conclude the evidence relating to that language by an examination of the four Lycian words derived from the base *prin*, and given above (p. 70).

As they show the grammatical structure of the language, their importance is very high. They are these :—

prin-êzeyêwe, '*οἰκεῖοι*'.
prin-êze, '*οἰκεῖος*'.[1]
prin-afu, '*μνῆμα*'.
prin-afatu, '*ἐποιήσατο*'.

These four words will now be compared with the Georgian especially; and to the Georgian we will pass through the Chinese, a language which has not yet been cited in connection with the Lycian words derived from *prin-*, although the Chinese abounds in such words, out of which I have selected some as the most appropriate for our purpose, and employed them at the same time to illustrate another Lycian word, *πίναρα*, '*στρογγύλα*', which was the name of a Lycian city as well, and of one near the Syrian Gates.

Lycian base *prin-*, 'build'.
pin-, 'round'.
Chinese *fañ*, 'room, dwelling, grave'.
fan, 'tomb (*μνῆμα*)'.
pín, 'to bury'.
p'hín, 'to go around'.
pín, 'flat, round, circular, a tablet'.[2]
yuen { 'round'. 'a yard'. 'a walled inclosure'.
hwán { 'round'. 'a circuit'. 'a wall round a palace'.
yiñ, 'to go around'.
yuñ, 'wall, rampart'.
yiñ, 'tomb'.
kin, 'hut, cottage'.

[1] Probably: but the epitaph in which *prinêze* occurs is not bilingual.
[2] Cf. Georgian *pinaki*, = Greek *πίναξ*, = Ossetic *fiñe*, = Armenian *pnak*.

Chinese *shiñ, sheñ*, 'wall, walled city, sepulchre'.
Lithuanian *sẽna*, 'wall'.
Armenian *shên*, 'village': gen. *shini*.
shin-, 'build'.
Georgian *shin*, 'within, *dedans*' (Klaproth).
shina, 'dedans'.
shina qma, 'domestiques'.[1]
. . *każ-i*, 'man' (see *ante*, p. 56).
każ-ebi, 'men'.
Lazic . . *koǵi*, 'man'.
koǵ-ephi, 'men'.
LYCIAN *prin—êze*, 'domestique'.
prin—êz-eyêwe, '*οἰκεῖοι*'.
Tibetan *bran*, 'slave, *οἰκεῖος*'.
brañ, 'mansion, station'.
Assamese *ren*, 'house'.
Nepalese *pañ*, 'house'.
Tuschi *p'hen*, 'a village'.[2]
Georgian *sheni*, 'a village, built, inhabited'.
Accadian *pin*, 'foundation'.
apin, 'construction'.
LYCIAN *prin-—afu*, '*μνῆμα*'.
Georgian *shen-—oba*, 'building, *gebäude*'.
shen-—eba, 'building'.
v- *ashen--eb*, 'I am building, I build'.
v- *ashen--ebdi*, 'I built'.
ashen--ebda, 'he built'.
shehkr-*evda*, 'he bound'.
zrach--*vida*, 'he thought'.

[1] For *qma* or *qoma*, 'young man, servant, *παῖς*', see *ante*, p. 54. In its derivative, *qm-oba*, 'slavery', we have a Georgian form like the Lycian *prin-afu*. The Georgian language is full of such forms, and uses them, as will be presently seen in the text, for verbal bases, in the same manner as the Lycian.

[2] The nom. sing. is *p'he*, but the nom. plur. is *p'hen-ish*, and *-ish* is a plural suffix.

Georgian thkh—*ovda*, 'he asked'.
khat—*avda*, 'he depicted' (*khati*, 'a picture').
Lycian *prin*—*afatu*, '*ἐποιήσατο*'.

The agreement between the Georgian and the Lycian languages seems here complete and thorough enough to class them in the same family, and may serve, with what has gone before, as a sufficient exemplification of what I have stated above, and endeavoured to show in previous publications; namely, that the Pre-Aryan population of Asia Minor and Armenia, and of the South (at least) of Europe, was Iberian, i.e., Caucasian. To this supposed Iberian race I have inferred or conjectured that the following nations of antiquity belonged:—the Lycii, part of whose architecture betrays a wooden origin (Fellows, p. 128), while part is Cyclopean; the Pæones, whose pile-dwellings on Lake Prasias, the counterparts of those in Switzerland, are described by Herodotus; the Tusci of Italy, and of the Caucasus; the Ligyes of Italy and Gaul, and of Pontus and the Caucasus; the neighbours of these Pontic Ligyes being the Tibareni, whose agreement with the Basques in the singular custom of the *couvade* is dwelt upon by Mr. Tylor in his *Early History of Mankind* (pp. 295-297); the Iberi of Spain, the ancestors of the Basques, and the Iberi of the Caucasus, the ancestors of the Georgians; and, finally, whether in Europe or Asia, where they occupy a central and connecting position among the nations just enumerated, the widespread tribes of the Pelasgi; a name which I have interpreted from the Armenian as meaning 'old-race', and considered to be one given by the Aryan Thracians to the Iberian Aborigines whom they encountered in their western progress from Armenia to Etruria.[1] Between the forefathers of these Iberians, of the Turanians, and of the Americans, there would be a closer bond of connection

[1] *The Asiatic Affinities of the Old Italians*, p. 11.

than what unites any one of those three races to the Aryan race, or the Semitic race, or the African race; under one of which last three names, with the addition of Turanian and Iberian, all the nations of the Old World might probably be comprehended.

We now return to our words, and pass on from the names of man to those of the members of the human body:—

'Head.'

South America . . .	Quichua	*um*——*a.*
	Andaqui	*quin*——*aji.*
	Tupi	*kan*——*ya.*
	Curetu	*caum*——*eo.*
	Guana	*kom*——*baipoi.*
	Kiriri	*żam*——*bu.*
		zam.
		pucroih.
	Aymara	*pegke.*
	Yarura	*paću.*
	Coropo	*pitao.*
	Jaoi	*boppe.*
	Mura	*abbaih.*
	Oregones	*huha.*
	Omagua	*yacae.*
	Puelche	*cacaa.*
	Mbokobi	*icaic.*
	Guarani	*acañ.*
	Taruma	*atta.*
	Guaque	*jutuye.*
Hayti	Taino	*zim*——*u.*
North America	Pima	*m*——*ouk.*
	Unalashka	*kam*——*hek.*
	Kuskutshewak	*kam*——*ikuk.*
	Piskaws	*khum*——*ukum.*
	Khwakhlamayu	*khomm*—*o.*

'Head.'

North America . .	Kowelitsk	*khom---ut.*
	Kenay	*shañ——ge.*
	Willamet	*tam-——utkhl.*
	Natchez	*tomne apoo.*
	Kij	*apoam.*
	Copeh	*buhk.*
	Maya	*oc.*
	Hoopah	*okheh.*
	Masaya	*acu.*
	Chetemacha	*kutte.*
	Kulanapo	*kaiyah.*
	Mohave	*cawawa.*
	Mexican	*hool.*
	Hailtsa	*hete.*
	Atna	*ża.*
	Takulli	*biża.*
	Pawnee	*pakshu.*
	Dahcota	*pah.*
	Massachusetts	*puhkuk.*
	Riccaree	*pahgh.*
	Tesuque	*pto.*
	Caddo *kun-——*	*do.*
Old World . .	Kamtshatkan *kom-——*	*ptko.*
	Dofla *dom-——*	*po.*
	Malay *tañ-——*	*gak.*
		jahe.
		huhguh.
		ako.
	Japanese *atam ---*	*a.*
	Luchu	*busi.*
	Siamese *kam ——*	*on.*
	Nepalese *tañ.*	
		bui.

'Head.'

Old World	Nepalese	*piya.*
	Finnish	*piyä.*
		pöja.
		oike.
		bui.
		pä.
		fo.
	Polynesian	*poho.*
		upoco.
	Samoyed	*eba.*
		aewa.
	Tasmanian	*ewucka.*
	Australian	*iouka.*
		quiku.
		kaoga.
		poko.
		kakka.
		hollo.
		kat.
		pada.
	Yeniseian	*kolka.*
		żig.
		takai.
	Circassian	*ćkha.*
	Georgian	*thavi.*
	Tungusian	*topti.*
		del.
		uǵu.
	Turkish	*bash.*
		pash.[1]
	Tshuvash	*puz.*
	African *yim*-——*e.*	

[1] Shakespeare uses *pash* for 'head' (*Winter's Tale*, Act 1, Scene 2).

'Head'.

Old World	African	*ohum*——*e*.
		ohum——*o*.
		amm——*o*.
		khomm—*o*.
		kumm——*u*.
		tomm——*o*.[1]
		dam——*oa*.
		etim——*i*.
		usum——*i*.
		hon——*yi*.
		kuñ——*e*.
		kuñ.
		bu.
		tu.
		ku.
		tul.
		gika.
		t'uki.
		tugo.
		itki.
		ada.
		igi.
		bukou.
		fukou.
		pofa.

'Hair.'

South America . . .	Quichua	*ćuća*.
	Coropo	*iće*.
	Apinage	*itki*.
	Caraho	*ikei*.

[1] Such words as these for 'head' may be compared with the Georgian *thma*, the Japanese *kami*, and the Came (Brazil) *guem*, 'hair'.

'Hair.'

SOUTH AMERICA . . . Bororo *itai*.
Coroado *gue*.
Chibcha *zye*.
Cayowa *siaweu*.
Tecuna *tayaoe*.
Guana *dooti*.
Catoquina *ghytai*.
Masacara *ćöh*.
NORTH AMERICA . . Savaneric *ćugags*.
Mexican *żoż*.
Masaya *tusu*.
Attakapa *taesh*.
Pawnee *oshu*.
Utah *suooh*.
Khwakhlamayu *shuka*.
Chinook *ukushshu*.
Skittegats *cutż*.
Chetemacha *kutteko*.
Kolush (Sitka) *koshahaoo*.
Kowelitsk *kuskus*.
Skwali *skhażo*.
Umkwa *suga*.
Atna *szega*.
Chepewyan *thiegah*.
OLD WORLD . Finnish (Karelian) *tukka*.
Turkish *shoka*.
shaǵ.
ćać.
żać.
żaż.
thash.
sać.
Tshuvash *zuz*.

'Hair.'

OLD WORLD . . . . Basque *adaż*.
Annamitic *tok*.
Soiony *tük*.
Tuschi *ćo* (plural, *ćoin*-ish).
Mongolian *usu*.
Thochu *kaću*.
Sokpa *kećige*.
Koriak *käćugui*.
Karen *kho-thu*.
Mon *swet*.
Chinese *fat*.
Central India *hata*.
katha.
ćuti.
Namsang Naga *kaćo*.
Angami Naga *ażütha*.
Circassian *shażey*.
Abkhasian *kuakokh*.
Tamil *kuźal*.
Tasmanian *cethana*.
Australian *kaat*.
ćao.
yuka.
yerreñ.
Kamtshatkan *ćeron*.[1]
Finnish (Mordvin) *ćer*.
African *sere*.
seri.
eru.
gashi.

[1] Compare the Botocudo (Brazil) *kraine*, *krene*, *keräñ-cat*, 'head', and *kraine-ke*, *kreinke*, *kerän-kä*, 'hair' (*ke*, 'hairs'); words akin to each other, as are *caput* and *capilli*, κάρα and *crines*.

'Hair.'

OLD WORLD . . . . African *gasa*.
ǵegan.
suki.
suku.
yat.
żagera.
Hebrew *se'ar*.
Arabic *shaar*.
Aryan *haar*.
crines.
χαιτ-
keça.
cæsaries.

'Eye.'

SOUTH AMERICA . . QUICHUA *ñaui*.
ñahui.
ñahuiy, 'my eye'.
Tecuna *nehaai*.
Araucanan *ñe*.
Uirina *nacu*que.
NORTH AMERICA . . Mexican *nić*.
Navaho hu*nnah*, 'my eye'.[1]
Tlatskanai *nakhai*.
Umkwa *nage*.

[1] Here the prefix *hu-* implies the first person, as the suffix *-y* does in Quichua, and as the suffix *-que* would in Uirina, both above in *nacu-que*, and below (s.v. *lloke*) in *loo-que* and *locau-que*. Such personal affixes are very characteristic of American languages. The Navaho prefix of the first person, *hu-*, which is thus identical with the Quichua suffix *-y*, and the Uirina suffix *-que*, as well as with the Coeruna (Brazil) prefix *co-*, is also identical with another form of the Quichua affix of the first person, *hua:* e.g., *muna-n-ki*, 'thou lovest'; *muna-hua-n-ki*, 'thou lovest me' (root *muna*, 'love'). Compare *muna-hua-n-ki* with such a Basque form as *galtz-en n-a-zu*, 'thou losest me', where *galtz-en* = 'losing-in', and *n-a-zu* = 'me-art-thou'.

'Eye'.

Old World	. . .	Mongolian *nyude.*
		nidu.
		nyudeñ.
		Korean *nuon.*
		Chinese *ñan.*
		yen.
		Circassian *neh.*
		Sanskrit *nayana.*
		Dofla *nyuk.*
		Jili *nyu.*
		Singpho *mi.*
		Japanese *me.*
		Nepal *mi.*
		mik.
		Tibetan *mik.*
		Santali *meh.*
		Kol *met.*
		Malay *mata.*
		Polynesian *mata.*
		maka.
		Australian *ma.*
		mir.
		mil.
		mit.
		mena.
		African *mo.*
		mos.
		masa.
		nish.
		nuku.
		ñai-kau.
		nito.
		nuñ.

'Eye.'

OLD WORLD . . . . African *ñe.*
nya.
ya.

'Nose'.

SOUTH AMERICA . . . QUICHUA *senka.*
Chibcha *saca.*
Botocudo *kiijink.*
Tupi *asigna.*
itiñ.
tim.
ćani.
Oyambi *inci.*
Guato *taga.*
NORTH AMERICA . . Ojibway *shañguin.*
Atna *sonćis.*
Sekumne *suma.*
Maya *zam.*
Otomi *xinu.*
Pinalero *ćinći.*
Chetemacha *ćiće.*
Masaya *ta'co.*
Pima *tahnk.*
Abenaki *kitan.*
Tlatskanai *khoinżus.*
Kadiak *kinaga.*
Labrador *kingat.*
Copeh *kiunik.*
Pujuni *henka.*
Miami *keouane.*
Bethuck *gheen.*
Skittegats *coon.*
Mohave *ihn.*
Tesuque *heu.*

'Nose'.

North America . . Cuchan *hu*.
Talatui *uk*.
Costano *us*.
Oceania, etc. . . Polynesian *ihu*.
ucu.
isu.
hihou.
guihin.
hingue (New Caledonia).
ingeǵe.
Australian *eye*.
kowo.
ćeengi.
kawiñgnata.
koñgnetok.
Malay *igu*.
iñ.
ihoñ.
enga.
ingök.
ingutu.
sengote (Borneo).
ćungur (Java).
Formosan *gongos*.
Tasmanian m*ongui*.
Nicobar m*hañ*.
Luchu *honna*.
Japanese *khana*.
Kurile *idu*.
ahdum.
Kamtshatkan *kayako*.
Kurile *ekhaekh*.
häahgeñ.

'Nose'.

ASIA, ETC. . . Asiatic Esquimaux *khüñgak*.
Yukahiri *yongyul*.
Tungusian *ongokto*.
ongata.
Yeniseian *hañ*.
añ.
an.
Finnish n*ena*.
n*inna*.
n*juone*.
Tshuvash *sumsah*.
Akush (Caucasus) *kank*.
English Slang *conk*.
Ossetic *finẓe*.
Armenian *ovnć* (=*unć*).
Albanian *choundë*.

I conclude by making some special comparisons with African words for 'nose':—

AFRICA . . Hottentot—*quoi* *kowo*—Australia.
Nufe—*eye* *eye*—Australia.
Bini—*ihue* *ihu*—Polynesia.
Ashanti—*ehui* *igu*—Malay.
Egbele—*isue* *isu*—Polynesian.
Bamom—*edyi* *idu*—Kurile.
Tiwi—*ehiñga* *ihoň*—Malay.
Shílluk—*uñ* *añ*—Yeniseian.
Koldagi—*hein* *khana*—Japanese.
Accrah—*gungo* *kank*—Akush.
Bornu—*kenża* *choundë*—Albanian.
Houssa—*hanǵi* *ovnć*—Armenian.
Amharic—*afinća* *finẓe*—Ossetic.
Dualla—*pimba* *pinẓa*—Abkhasian.
Gindzhar—*adan* *ahdum*—Kurile.

AFRICA . . .	Arkiko—*anf*	*anf*—Arabic.
	Hurur—*oof*	*af*—Hebrew.
	Kono—*suñe*	*suma*—Sekumne.
	Danakil—*san*	*zam*—Maya.
	Kandin—*ǵinǵar*	*ćinći*—Pinalero.
	Gongur—*sićo*	*ćiće*—Chetemacha.
	Woratta—*sidi*	*sudo*—Mordvin.
	Kaffa—*sullia*	*sudur*—Basque.
	Okuloma—*nini*	*ninna*—Esthonian.[1]

'Mouth'.

SOUTH AMERICA . .	QUICHUA *simi.*	
	Came *sane.*	
	yencu.	
	Iquito *kainga.*	
NORTH AMERICA . . .	Kadiak *kanot.*	
	Kuskutshewak *kanik.*	
	Labrador *kannerk.*	
	Kowelitsk *kunikh.*	
	Skwali *kamukh.*	
	Sahaptin *im.*	
	Wallawalla *em.*	
	Guajiquiro *iñh.*	
	Pima *ćiniż.*	

[1] Leo Reinisch says, in his *Einheitlicher Ursprung der Sprachen der Alten Welt* (p. x): "Die Menschenracen der Alten Welt (von Europa, Asien und Afrika) sind Species einer einzigen Art, sind Abkömmlinge einer einzigen Familie welche ihre ursprünglichen Stammsize an den äquatorialen Seen von Afrika inne hatte von wo aus die Nachkommen dieser anfänglich dem Laufe der Flüsse folgend sich nach den verschiedenen Richtungen des afrikanischen Festlandes und zulezt nach Europa und Asien verbreitet haben." Yet, if it appears, as I think it does on philological grounds alone, that the Americans belong to the same family as the rest of mankind, is not the cradle of our race more likely to have been in the centre of the Old World than in Equatorial Africa?

'Mouth'.

North America . . Shoshoni *timpa*.[1]
Ottawa *tone*.
Narragansett wu*ttone* (*wu-*, 'my').[2]
Micmac *toon*.
Umkwa *ta*.
Tesuque *so*.
Etchemin ne*swone* (*ne-*, 'my').[2]
Sekumne *sim*.[3]
Lutuami *shum*.[4]
Tulare *shemmak*.
Cayus *sumkhaksh*.
Catawba *esomo*.
Old World . . . . Finnish *ushma*.
shun.[5]
sun.
suu.
im.
Ude *zumukh*.
Yeniseian *kan*.
ko.
Tibetan *kha*.
Chinese *hau*.
Mongolian *ama*.
amañ.
Tungusian *hamun*.
amga.
anga.

[1] Cf. Tupi (Brazil) *tembe*, 'lip'; *tim*, 'nose'; and *tino*aba, 'beard' (*aba*, 'hair'): also Tesuque *hompo*, 'beard'; and Wihinasht *tama*, 'teeth'.

[2] See *ante*, p. 83, note.

[3] Compare the Sekumne *sim*, and the Quichua *simi*, 'mouth', with the Omagua (Peru—Brazil) *seme*, 'lip'.

[4] Cf. Patagonian *shum*, 'lip', and Masaya (Nicaragua) *semu*, 'tooth'.

[5] Cf. Chinese *shun*, 'lips'.

'Mouth'.

OLD WORLD . . . Samoyed *añ*.[1]
Australian *añka*.
Tasmanian *kane*.
weenina.
Papuan *gani*.
Bugis (Malay) *timu*.
Nepalese *suñ*.
kwom.
so.
si.
African *kana*.
kun.
gemei.
emi.[2]
imi (Berber).
ama.
am.
ożom.
simota.
shu.

'Tongue.'

SOUTH AMERICA . . QUICHUA *kkallu*.
Patagonian *del*.
Chibcha (New Granada) *pcua*.
NORTH AMERICA . . Tesuque *hae*.
Utah *ahoh*.
Masaya *duhu*.
Kadiak *ulue*.
Kuskutshewak *alianuk*.
Kulanapo *bal*.
Palaik *ipili*.

[1] Compare the Georgian *ena*, and the Cayuvava (Bolivia) *ine*, 'tongue'.

[2] Compare the Accadian *emi*, 'tongue'.

'Tongue'.

North America . . .	Cuchan	*epulche.*
	Kenay	*szilue.*
	Takulli	*zoola.*
	Tulare	*talkat.*
	Jakon	*tulela.*
	Sheshatapoosh	*telleenee.*
	Micmac	*willenonk.*
	Miami	*wehlaneh.*
	Illinois	*wilei.*
Old World	Koriak	*gil.*
		yilegit.
		ülygyl.
	Yeniseian	*ilygyl.*
		alyap.
		alup.
	Tungusian	*ilga.*
		ilenga.
	Mongolian	*keleñ.*
		khele.
	Finnish	*yolma.*
		kiyali.
		keli.
		kel.
		kyl.
	Tshuvash	*ćilge.*
	Turkish	*til.*
		tel.
		del.
	Old Dacian	δάλλα.[1]
	Andaman	*talie.*
	Australian	*tale.*
		talley.

[1] Βουδάλλα, '*βούγλωσσον*' (Dioscorides).

'Tongue'.

OLD WORLD . . . Australian *tulle*.
talan.
dalan.
talañ.
Tasmanian *tullana*.
Malay *dila*.
ǵila.
lela.
Polynesian *lelo*.
alele.
African *ile*.
ale.
bele.
dali.
halla.
liliwe.
lenna.
lilim.
limi.
lam.
ulema.
puleme.
telam.

'Ear'.

The Quichua for 'ear' is *rinkri*, apparently a compound word, as the language has also uya*ri*-, 'hear' (*uya*, 'face'), and uya*ri*na, 'hearing'. The root thus seems to be *ri*, which occurs both at the beginning and the end of *ri*nk*ri*, and makes the analysis more difficult. I divide below into *rin-kri* for purposes of comparison :—

SOUTH AMERICA . . . QUICHUA *rin—kri*.
Came *ni———gre*.

'Ear'.

South America . . .	Bororo	*cna--hiri.*
	Guaque	*jan--ari.*[1]
	Itenes	*in ---iri.*
	Cayapo	*ći-—ccre.*
North America . . .	Opatoro	*yan.*
	Attakapa	*ann.*
	Utah	*nin--k.*
	Cahuillo	*nan--ocka.*
	Chetemacha	*ura--hache.*
Old World	Australian	*bena-ngarei.*
		bine.
		pinna.
		iri.
		wure.
		gure.
		kure.
		kowra.
	Tungusian	*shin.*
		shan.
		kor--ot.
	Finnish	*körw.*
		korwa.
	Georgian	*quri.*
	Chinese	*'rh.*
		i.
	Nepalese	*kan.*
	Indian	*kan.*
		kirru.
	Sanskrit	*karṇa.*

[1] As the Guaque language possesses also, in addition to *jan*-ari, 'ear', the words, *on*-ari, 'nose', *jutuy*-ari, 'hair', and *jutuye*, 'head', it would appear probable that it is the first member in *jan*-ari, 'ear', and therefore in the Quichua *rin*-kri, 'ear', which contains the root of 'hearing'.

'Hand'.

South America . . . Quichua *maki*.[1]
Mayoruna *maku*.
maki quić (*ante*, p. 39).
Curetu *muhu*.
Carib *amecu*.
Macuni *aimke*.
North America . . . . Pima *mahahtkh*.
Tesuque *maho*.
Sekumne *ma*.
Comanche *mowa*.
Old World . . . . . Siamese *mo*.
Kol *mo*ya, 'five'.
Africa (Diwala) *ma*, 'palm'.
(Runda) *mok*, 'palm'[2]

'Right hand'.

South America . . . Quichua *paña* (*ante*, p. 39).
Patagonian *fan*, 'hand' (Martius).
ćeme, 'hand' (D'Orbigny).
Catoquina *pañ*, 'arm'.
paghy, 'hand'.
Yuracares *bana*, 'hand'.
Old World . . N. Burmah (Songpu) *ban*, 'hand'.
(Luhuppa) *pañ*, 'hand'.
(Khoibu) *wañ*, 'foot'.
Himalaya (Rampoor) *buñ*, 'foot'.
Sanskrit *pâṇi*, 'hand'.
Africa (Bayon) *bañka*, 'foot'.

[1] Compare the Botocudo *mak*, 'leg'.

[2] Compare also the African (Melon) *moe*, 'finger, one', and the Chinese *mau*, *mu*, 'the great toe'. *M ones* are found in Africa; in Armenia, Greece, and Etruria; and in India, Pegu, and Cambodia. See my *Numerals*, p. 48; and *infra*, chap. v.

'Right Hand'.

OLD WORLD . . Africa (Kisi) *beñgo*, 'leg',
(Mampa) *beñ*, 'leg'.
(Kasm) *vañ*, 'upper arm'.
(Kasands) *pañga*, 'shoulder'.

'Left hand'.

AMERICA . . . . . QUICHUA *lloke*.
Uirina (Rio Negro) *loo*que, 'thigh'. } *-que*, 'my'.
*locau*que, 'foot'. }
Kadiak (Alashka) *looga*, 'foot'.
OLD WORLD . . . Tasmanian *logui*, 'forefinger'.
pere*loki*, '*finger*-nails'.[1]
N. Assam (Dofla) *laga*, 'foot'.
lak, 'hand'.
Africa (Momenya) *lae-ku*, 'foot-sole'.
(Bagba) *la-ku*, 'foot-sole'.
(Isuwu) *lika*, 'palm'.
Finnish (Esthonian) *like*, 'limb'.
(Lapponic) *lokk*-et, 'to count'.
lokke, 'ten'.
-lokk, 'all, every one'.
Armenian *lok*, 'sole, single'.
Polish *lik*, 'number'.
Lithuanian *-lika*, 'ten' (in dwy-*lika*, etc.)
Tibetan *lagpa*, 'hand'.
Butani *lappa*, 'hand'.
Africa (Momenya) *lae-bo*, 'palm'.
(Bagba) *la-bue*, 'palm'.
(Nkele) *lebo*, 'foot-sole'.
Finnish (Lapponic) *lapa*, 'foot-sole'.
Turkish (Uigur) *lava*, 'ten'.

[1] Australian *peer*, 'nails'.

'Left Hand'.

OLD WORLD . . Malay (Sunda) -*lapan*, 'ten' (in sa-*lapan*, [('nine').
(Salawatti) *lafa*, 'ten'.
English -*leven*, 'ten' (in e-*leven*).
-*lve*, 'ten' (in twe-*lve*).
Danish -*lv*, 'ten'.
-*leve*, 'ten'.
Swedish -*lf*, 'ten'.
-*lfva*, 'ten'.
-*lofva*, 'ten'.
lofve, 'palm', } = Scotch *loof*.
Gothic *lofa*, 'palm', }
-*lif*, 'ten'.
Welsh *llaw*, 'hand'. [*hand*'.
Afghan *lapa*, 'space within closed
AMERICA . . . . . QUICHUA *llapi*, 'apretar con la *mano*'.
llapa, 'all' (cf. Lapponic -*lokk*, 'all').

'Foot', or 'leg'.

SOUTH AMERICA . . . QUICHUA *ćaki*, 'foot, leg'.
Chibcha *goca*, 'leg'.
Mayoruna *quesi*, 'leg'.
Correguage *coapi*, 'foot'.
Aymara *cayu*, 'foot'.
Guana *gooa*, 'leg'.
Araucanan *cuugh*, 'hand'.
NORTH AMERICA . Chepewyan *cuh*, 'foot'.
Opatoro *quagi*, 'foot'.
OLD WORLD . . . . Andaman *guki*, 'foot'.
Malay *kaki*, 'foot'.
Ossetic *kæch*, 'foot'.
Africa (Pika) *sheke*, 'foot, leg'.
(Nki) *keka*, 'leg'.
(Melon) *eko*, 'leg'.

'Foot', or 'leg'.

OLD WORLD . . . . . (Melon) *bumb-eko*, 'foot-sole'.
AMERICA . . . . . QUICHUA *ćaki*, 'leg, foot'.
ćaki-pampa, 'foot-sole'.
pampa, 'plain, *πεδίον*'.

'Bone'.

SOUTH AMERICA . . . QUICHUA *tullu*.
Cobeu *cualho*.
Coroado *ǵarra*.
Chavante *toi*.
Mundrucu *tauu*.
OLD WORLD . . . . . Ahom *tau*.
Chinese *kuh*.
Sanskrit *kulya*.
African *kulo*.
kolo.
wole.
sulu.
shila.
ǵila.
Georgian *ẓvali*.
Nepalese *salu*.
saruwa.
Basque *ezur*.
Munipuri *surru*.
Songpu *karau*.
Australian *goorook*.
Khoibu *thuru*.
Angami Naga *uru*.

Garo *kereñ*
Mantshu *gizeñgi*
Mongolian *yason*

} cf. Hebrew *gerem* and *'eżem*, 'bone', both which Gesenius considers akin to *geshem*, 'body'.

BAYERISCHE STAATS-BIBLIOTHEK MUENCHEN

'Bone'.

OLD WORLD . . Deoria Chutia *pićoñ*.
Bodo *begeñ*
Tablung Naga *wan* } cf. *bone*.
Japanese *hone*
Annamitic *xuoñ*.
Kumi *ahu*.
Burmese *ayo*.
aro.
Miri *aloñ*.
Malay *baluñ*.
tulañ.
(Tobi) *ćil*.
Southern Indian *zellu*.
yellu.
illu.
ella.
elu.
Finnish *lu*.
Samoyed *le*.

'Blood'.

SOUTH AMERICA . . . QUICHUA *yahuar* (=*yawar*).
Chibcha *yba*.
Cobeu *iwi*.
Masacara *höh*.
Coropo *icu*.
Tupi *iho*.
jui.
fougue.
tugui.
NORTH AMERICA . . Guajiquiro *uahug*.
Opatoro *uah*.
Tesuque *uh*.

STAATS-
BIBLIOTHEK
MUENCHEN

'Blood'.

NORTH AMERICA . . Attakapa *iggh*.
Chepewyan *dell* (*l*=*r* : see s.v. 'bone').
OLD WORLD . . . . . Basque *odol*.
Circassian *kleh*.
African *kil*.
yelo.
wuli.
ǵeli.
atale.
ǵeri.
atare.
kuri.
ara.
fore.
obere.
bagare.
eware.
ewu.
ehu.
yei.
Nepalese *hi*.
uyu.
heu.
hari.
Malay *dara*.
dugu.
toto (Marquesas).
koko (Hawaii).
duhu.
getih.
kero.
Finnish *weri*.
wer.

'Blood'.

OLD WORLD . . . . . Finnish *war*.

Greek *ἰχώρ*, Brahui *ditar* } cf. Quichua *yahuar*, Coropo *icu*, Tupi *tugui*, Marquesas *toto*.

We have now concluded the comparison of the Quichua terms for members of the human body with such terms in other tongues spoken by various races of mankind. The parallels are many: indeed, whatever difficulty there may be in determining the affinities of the language of the Incas, that difficulty may be said to arise, not at all from the paucity, but on the contrary from the multitude of coincidences between the Quichua and other forms of speech. And the same difficulty attends the group of words now about to follow; for words connected with the ideas of 'fire' and 'light' correspond in every part of the globe. This fact I have noticed and illustrated at the end of my *Numerals*, when considering the Old Egyptian 'five', *ṭua*, which signifies likewise 'star'. The base for all such words, as I have there suggested, may be given as *çvë*, which would produce, for instance, such words for 'fire' as the Basque *su*, the Samoyed *sü*, *tu*, the Mantshu *tua*, the Angola *tuya*, the Siamese *thwa*, the Chinese *hu*, *ho*, *fo*, the Californian *sa*, *ça*, and the Brazilian *ke*, *cuia*, *pohe*, *toua*. This same base, *çvë*, with a final *n*, or sometimes *m*, commonly added, and the resulting form frequently reduplicated, so as to produce, when fullest, a word like *çvënçvën*, would supply a foundation for all the terms now following, however much they may appear at first sight to differ from each other. The Quichua *pun-ćau*, 'sun, day', which heads the list, may be taken as an example of such reduplicated forms; and its two elements, *pun* and *ćau*, might be found in the Chinese *piñ*, 'firelight, bright' (=*çvën*), and *ćau*, 'day, daylight' (=*çvë*, to which the Chibcha *sua*, 'sun, day', in New Granada, comes still nearer).

Of terms so derived, those belonging to the Quichua are :—

QUICHUA *puńcau*, 'sun, day'.
ynti, 'sun, God'.
kon, 'God'.
kkanći, 'light'.
kkanay, 'to set on fire'.
kkoñi, 'a warm place'.
kkonća, 'fire-place, hearth'.

To these words I now give a series of parallels, beginning with the other parts of South America ;—

'Sun'.

SOUTH AMERICA . . Aymara *ynti*.
Araucanan *antuigh*.
Marauha *kumetu*.
Correguage *ense*.
Yagua *ini*.
Peba *wana*.
Araicu *ghuma*.
Patagonian *shwim*.
Zapara *janockua*.
Tecuna *iakai*.
Kiriri *uće*.
Mundrucu *uashi*.
Muru *hoase*.
Guana *kathai*.
Tariana *kethi*.
Pimenteira *titti*.
Caraho *putt*.
Timbira *puttu*.
Cherente *beudeu*.[1]

[1] Compare the Tuschi (Caucasus) *buth*, 'moon'.

'Moon'.

South America . . . Fuegian *conakho*.
anoco.
Chapacura *panato*.
Warow *wanehuh*.
Toma *enoo*.
Araucanan *cuyem*.
Ge *paañ*.
Taruma *piwa*.[1]
Puelche *pioo*.
Aymara *pagsi*.
Guarani *yasi*.
Masacara *gaćañ*.
Tariana *kethi*.
Chibcha *ćie*.

'Star'.

Mawakwa *wishi*.
Chibcha *fagua*.
Bororo *ikai*.
Guachi *aati*.
Bare *wenadi*.
Guinau *yuwinti*.
Masacara *pinnażö*.
Taruma *wingra*.
Menieng *pinia*.
Camacan *pioñ*.
Fuegian *conash*.

'Fire'.

Fuegian *poshaky*.
tettal.
Araucanan *k'tal*.[2]

[1] Compare the Finnish *päiwa*, *peiwe*, *pöiwa*, 'sun'.
[2] Compare the Vogul *kotal*, 'sun'.

'Fire'.

SOUTH AMERICA . . . Guarani *tata*.
Carib *wato*.
Betoi *futu*.
Puri *potheh*.
Toma *cathi*.
Guinau *ćeke*.
Antes *ćići*.
Coretu *ae-gacae*.
Camacan *hiöghköh*.
Tecuna *heu-heu*.
Apinage *couveu*.
Botocudo *ćon-peuk*.
Mura *huaiñ*.
Ge *piñ*.
Came *pin*.

'Day'.

Curetu *ipani*.
Bare *yehani*.
Sapiboconi *ćini*.
Pimenteira *jacañ*.
Came *gunia*.
Chibcha *sua*.
Juri *oa*.
Canamari *huy*.
Acroa Mirim *höuate*.
Guana *kaćai*.

'Sky'.

Otomaka *caga*.
Tupi *owaca*.
Guarani *ibag*.
Mbokobi *ipiguem*.
Correguage *queneme*.

'Sky'.

South America . . Moxos *anumo*.
Araucanan *huenu*.
Yarura *ande*.

'Sun'.

North America . . Umkwa *khañze*.
Talemenca *kanhue*.
Copeh *sunh*.
Kenay *ćannu*.
Savaneric *ćuhi*.
Tesuque *tah*.
Kioway *pai*.
Cree *pesim*.
Skoffi *beeshoon*.
Jakon *pižkom*.
Riccaree *shakoona*.
Navaho *ćokonoi*.
Pujuni *oko*.
Cayuga *kaaghkwa*.
Seneca *kaćqua*.
Opatoro *gashi*.
Choktaw *hashe*.

'Moon'.

Kuskutshewak *tangek*.
Kutshin *thun*.
Skittegats *kuhn*.
Jakon *okhon*.
Tesuque *pho*.
Kioway *pa*.
Ugalents *kakha*.
Seneca *kaćqua*.

The Seneca has thus the same word for 'sun' and 'moon', i.e., *kaćqua;* and the Tariana in South America has *kethi*

in the same manner. In another Iroquois language, the Onondaga, both luminaries are called *gar-aćqua*, apparently the same word as the Brazilian or Tupi *cur-asse*, and *huar-assi*, 'sun', as *-asse*, *-assi*, *-aćqua*, and *kaćqua*, would be identical with the Tupi *jaçi*, 'moon'. *Cur-*, *huar-*, and *gar-*, which help to distinguish 'sun' from 'moon' in South and North America, may be compared with the Quichua *kkarhua*, 'yellow' (cf. Sanskrit *hari*, 'yellow'), and *kkori*, 'gold' (cf. Zend *zara*, and Basque *urre*, 'gold'), and with the Ossetic *chor*, *chur*, 'sun'.

'Star'.

Slave *them*.
Atna *źun*.
Navaho *sonh*.
Pima *uon*.
Uchee *yuñ*.
St. Barbara *akehun*.
Tesuque *ahgoyah*.
Riccaree *saca*.
Minetaŕi *eekah*.
Chemehuevi *puć*.

'Fire'.

Unalashka *keyhnak*.
Kadiak *knok*.
Shoshoni *kuna*.
Chemehuevi *cun*.
Attakapa *cam*.
Kolush of Sitka *haan*.
Navaho *konh*.
Slave *khun*.
Takulli *kwun*.
Apatsh *kou*.
Copeh *poh*.
Dahcota *paytah*.
Tesuque *tah*.

'Day'.

Tesuque *tahn*.
Weitspek *tehnep*.
Netela *teme*.
Kutshin *zinna*.
Navaho *ćeen-go*.
Kenay *ćaan*.
Yankton *auñpa*.
Omaha *omba*.
Seneca *unde*.

'Sky'.

Unalashka *innyak*.
Labrador *killek*.
Adaihe *ganick*.
Seneca *kiunyage*.
Cuchan *ammai*.
Kioway *kiacoh*.
Catawba *wahpeeh*.
Uchee *houpouñ*.

Beyond the limits of America it may be sufficient to notice the following words :—

'Sun'.

Finnish *siuna*.
siuñ.
siunk.
shundy.
shonde.
pewen.
Turkish *kün*.
kun.
khun.
gyon.

'Sun'.

Turkish *kyonash*.[1]
Yeniseian *hikhem*.
ega.
kaya.
Basque *ekhi*.
Tungusian *shün*.[2]
shiggun.
shivun.
Korean *heñ*.
Siam and Tenasserim *tañway*.
kañwan.
tuwan.
kawon.
wan.
ban.
Burmah and Arracan *tanin*.
sami.
kani.
konhi.
E. Frontier of Bengal *doanye*.
wañhi.
ǵan.
sanh.[3]
san.
suhih.
N.E. Bengal *sañdoñ*.
san.
shan.
Nepalese *gama*.
dwam.

[1] Compare the Fuegian *conash*, 'star'.
[2] Compare the Copeh *sunh*, '*sun*'.
[3] Compare the Navaho *sonh*, 'star'.

'Sun'.

Nepalese *dini*.
uni.
iñ.
Central Indian *gomoi*.
singi.
ćando.
Malay (Timbora) *iñkoñ*.
Australian *inga*.
gan.
coiñ.
ćindu.
tindo.
toni.[1]
African *wiañgo*.
buno.
binek.
kioñ.
toyn.[2]
tañgu.

'Moon'.

Asiatic Esquimaux *tankuk*.
Koriak *gailgen*.
Yukahiri *kininshe*.
Kamtshatkan *quingan*-kuletsh.
Kurile *ćupu*.
zuki.
Japanese and Luchu *zuki*.
gwazi.

[1] With these Australian names for 'sun', and with similar words in other languages, compare the name of the Mexican sun-god, *tonatiuh*, the Quichua *ynti*, 'sun, God', and the Polynesian (New Caledonia) *intu*, 'God'.

[2] Compare the Tesuque *tahn*, 'day', and *tah*, 'fire'.

'Moon'.

Chinese *yueh*.
geh.
Tibetan *dawa*.
Siamese *tawan*.
Nepalese *ǵan*.
ǵanha.
ćalawan.
Central Indian *ćando*.
ćandal.
ǵagon.
Southern Indian *sanda*.
tingal.
tingla.
ćandra (=Sanskrit).
Australian *gille*.
kilai.
galan.
tahouawan.
aikana.
paićoway.[1]
Tasmanian *weena*.
African *pañge*.
ipañ.
yipañ.
opiana.
afiañ.
handu.
dinde.
señke.
sañ.
ǵyun.

[1] Compare the Aymara *pagsi*, 'moon', and the Fuegian *poshaky*, 'fire'.

'Moon'.

African *huana.*
kikena.
keana.
t'kaam.

'Star'.

Finnish (Vogul) *kenza.*
Samoyed *khinzigäi.*
kesanka.
Koriak *engen.*
engysh.
Kamtshatkan *eźingin.*
Mongolian *odoñ.*
odo.
Japanese *hoshi.*
Chinese *koñ.*
siñ.
Annamitic *tinh.*
Siamese *touk.*
Burmah and Arracan *kasi.*
ashi.[1]
Singpho *sigan.*
Nepalese *sañgyen.*
iñgai.
Central Indian *binka.*
sukum.
hukam.
Australian *ćindai.*
ǵingi.
ginaga.
kalga.
African *shunda.*

[1] Compare the Tupi *jaçi*, 'moon', and cur-*asse*, 'sun'.

'Star'.

African *ondu*.
keno.
Malay *geni*.
seuneu.
kiñkoñ.
panyean.
bintañ.
bintau.
binta.
vinta.[1]
betañ.
Polynesian *fetu*.
hetu.
hethu.

'Fire'.

Kamtshatkan *pangić*.
Kurile *ungi*.
apeh.
Malay *putuñ*.
apui.
api.
afu.
ahee.
Polynesian *afi*.
ahi.
ai.[2]
Australian *wi*.
win.
wiñ.
weañ.
koonnea.

[1] Compare the Quichua *ynti*, 'sun', and the Bare *wenadi*, 'star'.
[2] Compare the Turkish *ai*, 'moon'.

'Fire'.

Tasmanian *wighana*.
Shan *hpihn*.
Siam and Tenasserim *thwa*.
fai.
Japanese *kwa*.
Singpho *wan*.
Ceylon *gini*.
Ossetic *züñ*.
Central Indian *sengel*.
singil.
agin.
Aryan *agni*.
igni-.
ogon.
African *ogon*.
akan.
ikan.
egbon.
yañ.
wun.
ahina.
kanu.

'Day'.

Turkish *gün*,
kun.
kyun.
Siamese *wan*.
Shan *kawon*.
N.E. Bengal *shyan*.
shan.
san.
Central Indian *siñ*.
sugi.

'Day'.

Central Indian *simmya*.[1]
tamba.[2]
Malay *andau*.
onoñ.
koñkoñ.
sunit.
aso.
obi.
Polynesian *aso*.
ao.
a.
African *oho*.
oso.
aso.
oza.
eshui.
shui.
fue.
efen.
punak.
yanye.
yanyina.
kunagano.
wiangoa.
sana.
dian̄.
dayañ.
Basque *egun*.
Sanskrit *ahan*.
Hebrew *yôm*.

[1] Compare the Ossetic *saume*, 'morning'.

[2] Compare, in North America, the Netela *teme* and the Omaha *omba*, 'day'; and, in Assyria, the Accadian *tam*, 'day'.

'Sky'.

Koriak *eikhi*.
khayan.
häian.
khain.
yiñ.
Chinese *tien*.
tienkuñ.
Gyami *khen*.
Laos *fafon*.
E. Frontier of Bengal *teoñ*.
aniñ.
ṕicóni.
Nepalese *tañkhyañ*.
tundi.
Central Indian *konḍa*.
Southern Indian *ban*.
bana.
banu.
viṇ.
vanu.
vanam.
vaname.[1]
Africa *we*.
kanu. ['day'].
żanna (cf. Kutshin *żinna*,

Little need be said on the general result of the comparisons instituted among the six preceding words relating to 'light' and 'heat'. For they evidently connect together: —(1) The various American languages with one another; —(2) The various Turanian languages with one another; —(3) The various African languages with one another. In

[1] Compare, in South America, the Correguage *queneme*, and the Moxos *anumo*, 'day'.

the next place, they connect with one another the American, the Turanian, and the African languages; and all three, but in a less intimate degree, with the Aryan and the Semitic languages, so as to unite together all these five great branches of human speech. Some points of contact with the Aryan and the Semitic, not noticed above, have been pointed out by Gesenius and Diefenbach. Thus Gesenius considers the Hebrew *shemesh*, 'sun', to be a primitive word, and one connected with our English *summer* and *sun*; the latter word being, in Old High German, *sumna*, and in (obsolete) Gaelic, *sam*. In Patagonian, 'sun' is *shwim*, and in Sak (Burmah) it is *sami*. Such words, with others of the same class given in the preceding lists, may be added to those cited by Diefenbach in his *Lexicon Comparativum*, and may give additional force to what he has said there relative to the parallels of the Gothic *sunna*, 'sun': "So wenig wir die Identität dieser Wörter untereinander und mit den deutschen versichern mögen, so halten wir doch die ähnlich klingende Bezeichnung eines gewiss den Urglauben aller Völker berührenden Begriffes höchst bemerkenswerth." No doubt the existence of such resemblances is "in the highest degree remarkable", and hardly to be explained except on the supposition of a primeval affinity connecting together all the nations of the earth by the tie of consanguinity; while it intimates, in addition, that the early state of family or national union continued longer undissolved between some divisions of the human race, than it did between them and other divisions.

One or two Koriak and Australian names for 'moon' in the previous list should, perhaps, rather be included among the words now following, which are, however, to be referred also to the same original base, *çvë*:—

QUICHUA *killa*, 'moon'.
kkoyllur, 'star'.
kello, 'yellow, whitish'.

Mataguaya (La Plata) *guela*, 'moon'.
Mohave (California) *hullya*, 'moon'.
Ruslen (California) *hello*, 'fire'.
Khwakhlamayu (California) *kalaźa*, 'moon'.
Skittegats (New Caledonia) *kaaldha*, 'star'.
Koriak *yailgen*, *geilygen*, 'moon'.
Tungusian (Yakutsk) *haulen*, 'star'.
Turkish *yildis*, *zulus*, *ǵilǵis*, 'star'.
Tshuvash *zuldur*, 'star'.
khwel, 'sun'.
Finnish *shuder*, 'star'.
tylesh, *tilsye*, 'moon'.
tollo, *tulli*, *tul*, 'fire'.
Mongolian *kwal*, *gal*, 'fire'.
Gyami *yoliañ*, 'moon'.
Malay *bulan*, *wulan*, *wolli*, 'moon'.
New Zealand *whelu*, 'star'.
Australian *galan*, *kilai*, *palu*, 'moon'.
poulle, *pille*, *kalga*, 'star'.
poulle, 'sky'.
kal, *alla*, 'fire'.
Tasmanian *palana*, 'stars'.
African *kiele*, *kuol*, 'star'.
gweli, *wuele*, *wala*, 'moon'.
fale, *kele*, *gbele*, 'white'.
Sanskrit *kil*, 'to be white'.
Welsh *goleu*, 'light'.
Gaelic *gealach*, 'moon'.
geal, 'white'.
Basque *ill*argi, 'moon' (*argi*, 'light').

'Fire'.

Quichua *nina*.
Otomaka (Orinoco) *nua*.
Adaihe (Florida) *nañ*.

'Fire'.

Accadian *ne*.
African *na*.
ne.
nye.
nyin.
ñoñ.
nant.
nanż.
nyindeñ.

Akin to these words for 'fire' would be the Chinese *nün*, 'to warm', and *nuñ*, 'to toast'; as well as, in North America, the Atna *naai*, 'sun'. So are, perhaps, the words for 'eye' (*ante*, p. 83), with the Armenian *nay*-il, 'to eye'.

'Night'.

South America . . . Quichua *tuta*.
Menieng *uta*.
cuata, 'black'.
Ge *coco*.
Capoxo *oque*.
tau, 'black'.
Passe *gheseyu*.
ghesiu, 'black'.
Mayoruna *huizai*, 'black'.
Canamirim *yaćy*.
Bororo *oćai*.
Chibcha *za*.
Cobeu *yamui*.
Tucano *yami*.
Curetu *jami*.
North America . . . . Kenay *kaak*.
Jakon *kaehe*.
Kowelitsk *kwaiekh*.

'Night'.

NORTH AMERICA . . . Skwali *tkhlakh*.
Netela *tukmut*.
Shoshoni *tukwun*.
Nootka *atajai*.
Eudeve *ćugoi*.
Blackfoot *caquay*.
Pima *hoot*.
Uchee *pahto*.
Kulanapo *petih*, 'dark'.
Ojibway *tipik*.
Minsi *tpoćeu*.
Natchez *toowa*.
Shyenne *tah*.
Attakapa *tegg*.

OLD WORLD . . . . . Chinese *žik*, *sih*, 'evening, dark'.
Accadian *gig*, 'obscure, night'.
Circassian *ćeyći* } cf. Passe *gheseyu*.
kayshey }
Ossetic *ächsäv* }
Tuschi *ući*, 'darkness' (cf. Bororo *oćai*).
Japanese *yami*, 'darkness' } cf. Curetu *jami*, Tucano *yami*, Cobeu *yamui*.
Georgian *ghame* }
Sibsagar Miri *kammo* }
Malay *gamu* }
gabi.
Basque *gau*.
Finnish *gi*.
yo.
ö.
ej.
at.

'Night'.

OLD WORLD . . . . . Finnish *öht*, 'evening'.
ekked, 'evening'.
fekete, 'black'.
Turkish *geǵeh*.
Armenian *gisher*.
Japanese *ya*.
yoru.
Chinese *ye*.
yáli.
Gyami *khelo*.
khidi, 'black'.
Manyak *kwakah*.
Gyarung *todu*.
Angami Naga *tizi*.
kati, 'black'.
West Australian *kattik*.
Nepalese *khosai*.
khakwe.
ukhako.
ya.[1]
Marquesas *po*.
Samoyed *pi*.
fi.
African *to*.
tu.
żu.
atu.
otu.
ażu.
eżoh.

[1] Other Nepalese words for 'night' are:—*sepa*, um*sepa*, um*syapa*; with which may be compared the Quichua *sipi*, 'evening, twilight', as well as the Georgian *shavi*, Armenian *seav*, Zend *çyâva*, Sanskrit *çyâva*, *çyâma*, 'black', and the Chinese *siú*, *siáu*, 'dark, night'.

'Night'.

Old World	African *tuwu* *tuku* *teto* *użużu*. *tetañ*. *żażak*.	}	cf. Natchez *toowa*, Attakapa *tegg*, Quichua *tuta*.

In the names of 'water', which are two in Quichua, *yaku* and *unu*, I shall first compare South America with North America, and then America as a whole with the other parts of the world:—

'Water'.

Quichua.	South America.	North America.
	Fuegian *ćauash*.	Opatoro *uash*.
	Mataguaya *guag*.	Nootka *ćahak*.
	Malali *keće*.	Intibuca *guash*.
	Salivi *cagua*.	Cocomaricopa *haaće*.
yaku.	Mayoruna *waca*.	Khwakhlamayu *aka*.
	Ge *aeco*.	Choktaw *oka*.
	Correguage *oco*.	Blackfoot *ocquie*.
	Guachi *euak*.	Attakapa *ak*.
	Yagua *haha*.	Mohave *aha*.
	Mura *pae*.	Weitspek *paha*.
		Shoshoni *pa*.
		Tesuque *po*.
	Mundrucu *hu*.	Tuscarora *auwuh*.
		Catawba *eyau*.
	Tupi *hy*.	Masaya *eeia*.
	Araucanan *ko*.	Chetemacha *ko*.
		Umkwa *tkho*.
		Navaho *thu*.
	Lule *to*.	Athabaskan *to*.
		tu.
		Kioway *tu*.

'Water'.

Quichua.	South America.	North America.
	Taruma *ża.*	Shasti *aża.*
	Kiriri *ẓu.*	St. Antonio *ća.*
	Mongoyos *sa.*	
	Chibcha *sie.*	Costano *sii.*
	Camacan *sin.*	
	Carib *tuna.*	Unalashka *tanak.*
	tuno.	
	tuni.	
	wune.	
unu.	*uni.*	
	Omagua *uni.*	
	Baniwa *uni.*	
	weni.	
	Uaenambeu *una.*	
	Chuntaquiro *une.*	
	Guana *houna.*	
	Peba *ain.*	Kolush (Sitka) *ieen.*
	Aymara *huma.*	Hailtsa *waum.*
		Cherokee *ahmah.*
		Labrador *immek.*
	Moxos *tomi.*	
	sama.	
	como.	
	acum.	
yaku.	*jucu.*	
unu.	*jene.*	

Asia.	America.
Esquimaux *mok.*	Esquimaux *muek.*
Tungusian *muke.*	
muh.	
mu.	
mo.	

'Water'.

Asia.	America.
Esquimaux *emak*.	Esquimaux *immek*.
	tanak.
Nepal *tañ*.	
Ossetic *don*.	
Central India *tanni*.	Carib *tuni*.
pani.	*wune*.
Sikkim *oñ*.	Quichua *unu*.
Central India *am*.	Aymara *huma*.
Burmah—Assam *ishiñ*.	Camacan *sin*.
Mongolian *usun*.	
usu.	Shasti *aża*.
Chinese *shui*.	Chibcha *sie*.
shwui.	Costano *sii*.
Turkish *su*.	Mongoyos *sa*.
sux.	Fuegian *ćauash*.
sug.	Navaho *ćahak*.
Nepal *ti*.	Kioway *tu*.
ku.	Araucanan *ko*.
awa.	Mohave *aha*.
Kamtshatkan *i*.	Tupi *hy*.
Kurile *peh*.	Weitspek *paha*.
vaka.	Mayoruna *waca*.
	Quichua *yaku*.
Burmese *ya*.	Warow *he*.

Oceania.	America.
Tasmanian *mogo*.	Esquimaux *muek*.
moka.	*immek*.
Andaman *migway*.	Cherokeé *ahmah*.
Australia *kawi*.	Skwali *kho*.
kauwe.	Tuscarora *auwuh*.
kowwin.	Guana *houna*.
kan.	Moxos *jene*.
Maldive *feñ*.	Baniwa *wene*.

'Water'.

OCEANIA.	AMERICA.
Malay *awaen*.	Carib *wune*.
aiñ.	Peba *ain*.
aya.	Masaya *eeia*.
yeh.	Catawba *eyau*.
waya.	Mayoruna *waca*.
wai.	Yagua *haha*.
aki.	Khwakhlamayu *aka*.
toya.	Apatsh *toah*.
Polynesia *tan*.	Unalashka *tanak*.
	Carib *tuna*.
komo.	Moxos *como*.
vai.	Mura *pae*.

AFRICA.	AMERICA.
Boko *i*.	Guarani *i*.
Gio *gi*.	Chetemacha *ko*.
Mandingo *ǵi*.	St. Antonio *ća*.
Dahome *zi*.	Chibcha *sie*.
Soso *yige*.	QUICHUA *yaku*.
Opanda *enyi*.	Carib *uni*.
Udso *beni*.	*weni*.
Yala *yenyi*.	Kolush (Sitka) *ieen*.
Mose *com*.	Moxos *como*.
Bode *am*.	Hailtsa *waum*.
Pika *ama*.	Cherokee *ahmah*.

With such words as these last may be classed one of the Quichua words for 'rain', *tamya* :—

'Water'.	'Rain'.	'Rainy season'.
America *tomi*.	QUICHUA *tamya*.	Africa *tamo*.
immek.	Papua *komak*.	
como.	Algonkin *kimiwan*.	
sama.	Georgian *żvima*.	*sama*.
ahmah.		*hama*.
sin.		*san*.

Compare also the Sanskrit *tim*, 'humidum esse', the Armenian *tamovk*, 'humidus', and their many kindred words. Another Quichua word for 'rain', *para*, may be compared with the African *are, uroi, tara*, 'rain', and *kera, borei*, 'rainy season'; as the Quichua for 'small rain, cloud', *ypu, puyu*, may be with the African *yipo, yipuo, pio*, 'rain', and *yipo, yoya, yibin*, 'rainy season'.

'Tree'.

SOUTH AMERICA . . . QUICHUA *saća*.
haća.[1]
Cotoxo *sahie*.
hauue.[2]
Coretu *toockö*.[3]
Cauixana *gazo*.
Arawak *adda*.
Chavante *wede*.
Chicriaba *ode*.
Chibcha *quye*.
Camacan *hui*.
Menieng *hi*.
Baniwa *heicui*.
NORTH AMERICA . . . Nootka *soośis*.
Kolush (Sitka) *shaak*.
Attakapa *kagg*.
Unalashka *yakak*.
OLD WORLD . . . . Georgian *sesh*.
khe.
Ingush *keie*.
Japanese *ki*.
Chinese *sau*.
Hebrew *'êż*.

[1] Cf. Basque *aga*, *haga*, 'pole, long stick'.

[2] Cf. Catoquina (Brazil) *haghpa*, 'a wood', and Basque *abe*, *habe*, 'post, tree, wood, forest'. So German *baum*, 'tree', =English *beam*.

[3] Cf. Georgian *tqe*, 'wood, forest', and Albanian *degë, gyethe*, 'bough'.

'Tree'.

OLD WORLD . . . . Yeniseian *ać.*
oksa.
Turkish *aghaǵ.*
N.E. Bengal (Kocch) *gaćh.*
Maldive *gas.*
Accadian *gish* (*ante*, p. 67).
African *kesga.*
koǵi.
oǵi.
oki.
igi.
ki.
su.

Of the few words which still remain for examination, I now propose to take a pair together, *rumi*, 'stone', and *runtu*, 'egg'; both which I should imagine to be allied to one another, as well as to a third Quichua word, *rumpu*, 'round', which I shall therefore consider in conjunction with them. The connection between 'rotundity' and 'egg' may be seen in *ovum* and *oval*, *ei* and *eirund*: and Diefenbach asks (*Lex. Comp.* s.v. Krim. *ada*, 'ovum',=Sanskrit *aṇḍa*) :—"Ist *l* in Lett. *ôlas*, 'Eier, runde Steine', aus *ḍ* erstanden?"—thus bringing together the three things which are now to be compared conjointly in the Quichua and other languages. The base of *r-umi*, 'stone', *r-umpu*, 'round', and *r-untu*, 'egg', appears to be found in the Magar (Nepal) *rhu*, the Ahom (Assam) *khrai*, and the Savara (Central India) *are*, 'egg'; or in the Telugu (Southern India) *rayi*, the Basque *arri*, and the African *aro*, *haire*, *gere*, *gbere*, 'stone': cf. Albanian *arrë*, *charrë*, 'nut'. *Gbere*, or a similar African word for 'stone', *gberu*, may be taken as the complete form of the base, which is apparently reduced in Quichua to *r-* or *ru-*, and would besides, as will be

seen in the following list, assume in different regions many more and widely differing shapes; a fact which it will be necessary to keep continually in remembrance, in order that the signs of affinity may not escape notice. As, therefore, the base is most perfect in Africa, the list will be most advantageously commenced with the African words cited for comparison, to be succeeded by the North American, the South American, and the Asiatic and European; the list terminating with a comparison between Peru and Brazil on one side, and Japan, China, and the Indo-Chinese Peninsula on the other:—

	'Egg'.	'Round'.[1]	'Stone'.
Africa	Barba . . .	. . . .	*gberu*
	Boko . . .	. . . .	*gbere*[2]
			gbele
	Mano . . .	. . . .	*gere*
	Pulo . . .	. . . .	*haire*
	Kaure *yare*	. . .	*bire*
	Kabunga *kilo*	. . .	*bere*
	Pati . . .	. . . .	*aro*
	Nhalemoe . . .	. . . .	*ale*
	Murundo . . .	. . . .	*wale*
	Mbamba *be*	. . .	*kele*
	Dsawara *ki*	. . .	*tal*
	Gurma *gendi*	. . .	*tani*
	Dselana *ǵent*	. . .	*tant*
	Timbuktu . . .	. . . .	*tondi*

[1] Not given in the *Polyglotta Africana*, and therefore deficient here.

[2] For the manner in which a base like this enters into metal-names, as, for instance, into the Greek *σίδ-ηρος*; or into the Georgian *ver*-tskhli and the Basque zil-*ar*, 'silver'; or into the Georgian thith-*beri* and the Lithuanian szwit-*waras*, 'brass'; see my *Numerals*, p. 85. Mr. Tylor, in his *Early History of Mankind* (p. 213), notices some North American native names for 'silver', 'brass', and 'copper', which are respectively equivalent to *white-stone*, *yellow-stone*, and *red-stone*.

	'Egg'.	'Round'.	'Stone'.
AFRICA	Tekeza *tanda*		
	Kaffir *landa*		
	Akurakura *sher*	. . .	*etan*
	Vei *keli*	. . .	*señ*
	Kono *kili*	. . .	*siñe*
	Gbese . . .	. . .	*koni*
	Bornu . . .	. . .	*kou*
	Gio . . .	. . .	*gue*
	Bagba . . .	. . .	*go*
	Basa *ge*	. . .	*so*
	Berber . . .	. . .	*izzu*
	Balu . . .	. . .	*woa*
	Mampa . . .	. . .	*pe*
	Padsade . . .	. . .	*peañke*
	Bola . . .	. . .	*pulak*
	Coptic *soouhi* .	. . .	*al*
	Tette *zaï*		
	Kikamba . . .	. . .	*wia*
NORTH AMERICA.			
	Attakapa . . .	. . .	*wai*
	Opatoro . . .	. . .	*caa*
	Dog-rib . . .	. . .	*thai*
	Takulli . . .	. . .	*że*
	Dahcota . . .	. . .	*eeañ*
	Masaya . . .	. . .	*esee*
			esenu
	Cree *wawe*	*wowisew*	*usinne*
	Old Algonkin . . .	. . .	*assin*
	Miami . . .	. . .	*sahneh*
	Micmac . . .	. . .	*kundau*
	Shoshoni . . .	. . .	*timpi*
	Kadiak . . .	. . .	*yamak*
	Chinook . . .	. . .	*khalamut*
	Skittegats . . .	. . .	*tlaha*

	'Egg'.	'Round'.	'Stone'.
SOUTH AMERICA.			
Oyambi	*oupia*		
Catoquina	*bo*		
Jumana	. . .	. . .	*pahla*
Patagonian	. . .	. . .	*ćana*
Cotoxo	. . .	. . .	*kiañ*
			kea
Apinage	. . .	. . .	*kene*
Macuni	. . .	. . .	*comtai*
Coropo	*teme*	. . .	*nam*
Botocudo	*niñcu.*	. . .	*caratu*
	enkou		
		kon-tou.[1]	
Kiriri	. . .	. . .	*cro*
Came	*crem*	. . .	*crim*[2]
QUICHUA	*runtu*	*rumpu*	*rumi*
Coroado	*arinha poke*	*arund'euma*	
		cra-m-nake[3]	
	paki	. . .	*pre*[4]
EUROPE AND ASIA.			
Nepal (Nagar)	*rhu*	*dallo*	*lhuñ*
(Gurung)	*phuñ*	*phal-doñ*	*yuma*
(Denwar)	*dimba*	*dumro*	*donkho*
Tibetan	*sgoña*[5]	*zlumpo*	*rdo*
Siamese	*khai*	*klom*	*hin*
Ahom	*khrai*	*klom*	*fra*
India (Mayalalma)	. . .	*urunḍa*	*kalla*

[1] "Rotundum reddere." Martius gives four Botocudo dialects.

[2] 'Mountain', not 'stone': but a single word might stand for 'stone' and 'mountain'. Cf. Bororo (Brazil) *toli*, 'mons vel lapis' (Martius), a word like the Georgian *tali*, 'flint', and the Dsawara *tal*, 'stone'.

[3] 'A globe, a sphere.' [4] 'Mountain.'

[5] Compare the Tibetan *sgoñ-ba*, 'a making round'. The Tibetan initial letters, a peculiarity of the language, are left unitalicised.

	'Egg'.	'Round'.	'Stone'.
EUROPE AND ASIA.			
(Ancient Tamil)	*sinei*	*servana*	*kan*
(Telugu)	*guḍḍu*	*guṇḍu*	*rayi*
(Tuluva)	*teṭṭi*	*uruṭṭu*	*kalla*
(Irula)	. . .	*ruṭṭe*	
(Savara)	*are*	*gudi*	*arregna*
(Mundala)	*billi*	*gota*	*diri*
(Naikude)	. . .	. . .	*gund*
(Kolami)	. . .	*gundu*	
(Sinhalese)	*biǵǵa*	*guli*	*gala*
English	*egg*	*round*	
Crimean Gothic	*ada*		
Sanskrit	*aṇḍa*	*vartula*	
Ossetic	*ayke*	. . .	*dor*
Persian	*khâyah*	*gard*[1]	*khârâ*[2]
Armenian	*żov*[3]	*shovrǵ*[4]	*char*
Gaelic	*ubh*	*cruinn*	*carraig*[5]
Welsh	*wy*	*crwn*[6]	*carreg*[7]
Albanian	*ve*	*kyerthely*[8]	*gour*
Australian	*bwye*	. . .	*boye*
	kirkai	. . .	*poure*
			walañ
Caucasus (Georgian)	*kverżkhi*	*rkuali*	*chva*
(Tuschi)	*gaga*	*gogo*[9]	*qher*
			kenǵ[10]
(Circassian)	*kanghey*	*khurahi*	

[1] 'Circle'.
[2] 'Hard stone'.
[3] Cf. Coptic *soouhi*, 'egg'.
[4] 'Around'.
[5] 'Rock'.
[6] Cf. *corona*, *crown*, *krone*.
[7] 'Rock'.
[8] *Kyerthely* resembles the Sanskrit *vartula*, whatever the derivation of that word may be.
[9] 'Circle, ring'; also *gog:* compare the Uraon (India) *golgol*, 'round'.
[10] 'Pebble'.

	'Egg'.	'Round'.	'Stone'.
EUROPE AND ASIA.			
Basque	*arraultz*	*biribill*[1]	*arri*[2]
	koho		
E. Tibet (Takpa)	*khalum*	*birhi*	*gorri*
Biluchistan (Brahui)	. . .	. . .	*khall*[3]
Siberia (Yukahiri)	. . .	. . .	*kall*
JAPAN TO ARRACAN.			
Annamitic	*truñ*	*tron*	*da*
Japanese	*tamago*	. . .	*ishi*
	ran		
Laos	. . .	*kom*	
Chinese	*tan*	*yuen*	*shi*
	ć'un		
	lun	*lun*	
Khyeng (Arracan)	. . .	. . .	*lun*
Burmese	. . .	*ṭun*[4]	
		ṭonthi	
SOUTH AMERICA.			
QUICHUA	*runtu*	*rumpu*	*rumi*

[1] With *biribill*, and its ultimate base, the African *gbere*, *gbele*, 'stone', compare the Georgian *gvirgvini*, 'diadem, crown'.

[2] *Arri*, 'stone', appears in the Basque kask-*ara*bar, 'a large hail-stone, *grêlon*'; a word in which *kask-* may be compared with the Quichua *kkasay*, 'frost', and *kkasa*, 'ice', for which Sir Arthur Helps gives *cassa*, 'hail'; also, in North America, with the Navaho *yas* and the Nootka *queece*, 'snow'; with the Lapponic *kaisse*, 'mons altior, plerumque *nive* tectus'; with the Georgian *qiswa*, 'frost'; and with the name for 'glacier' in the Noric Alps, *käss*, *käse*, or *kees*. In like manner, we seem to find the Quichua *rassu*, *riti*, 'snow', in the Piedmontese *ruize*, 'glacier', a word allied to the Gaelic *reoth*, 'to *freeze*', and the Latin *rigeo*, *frigeo*. See *ante*, p. 68, note, for the Alpine word, *lawine*.

[3] Compare the Coptic *al*, 'stone', and the Hebrew *gal*, 'a heap of stones'.

[4] Also, "anything round, as an egg": Chalmers, *Origin of the Chinese*, p. 47. The Tasmanian *longa*, 'stone', belongs to this group.

	'Egg'.	'Round'.	'Stone'.
South America. Brazil	*crem*	. . .	*crim*
			cro
	teme	. . .	*nam*
	niñcu	. . .	*caratu*
		kontou	
	enkou		
		. . .	*kene*

'Bird'.

Analogies to the South American words for 'bird', in Quichua *piću* or *pisku*, occur in most parts of the world :—

South America.

Quichua *piću*.
pisku.

Coroado *ćippu*.

Botocudo *bakanne*.

Omagua *huera*.

Tupi *oera*.

North America.

Blackfoot *piksi*.

Atna *spiou*.

Dahcota *zitka*.

Sekumne *żit*.

Jakon *kukuaia*.

Old World.

Brahui *ćuk*.

Nepal *ćakpu*.
ćak bwa.
ćhowa.
wasa.
wa.[1]
bu.
bukhińća.
ćaḍa.
ćari.

Japanese *tori*.

[1] Compare the Quichua bird-names, *hua*-lpa, 'fowl', *hua*-ko, 'sparrow-hawk', *hua*-man, 'falcon', *hua*-llata, 'goose'; which seem to give *hua* (=*wa*), 'bird', i.e., 'flyer'. See next note but one, and compare the different meanings of the English *fly*.

'Bird'.

South America.	Old World.
Cayowa *guera*.	Basque *chori* (=*ćori*).
Quichua *pisku*.	*pizti*.
	egazti.
	Mantshu *gashka*.
	Turkish *kush*.
Omagua *huera*.	Central India *ure*.
Tupi *oera*.	*orak*.
Quichua *pisku*.	*piska*.
	pitta.
	Accadian *pag*.
	Southern India *pakki*.
piću.	*pakshi*.
	Sanskrit *pakshin*.[1]
	Lithuanian *paukszti*-s.
	Russian *ptitsa*.
	Circassian *bzu*.
	Tibetan *ćya*.
	byu.
	China-Tibet *gyo*.
	pya.
	pye-pye.[2]
	Burmah-Assam *wu*.

[1] From *paksha*, 'wing': see Bopp, who compares the Lithuanian *pauksz-tis*, which follows, and also the German *vog-el*, = English *fow-l*; "fortasse Lat. *passer* e *paxer*".

[2] There seems to be a similar reduplication of the root in the Quichua *pa-hua*, 'to fly, to run'; a root apparently recurring in such words as *hua*ta, 'a year', *hua*raka, 'a sling', *hua*lpa, 'a fowl', *hua*naku, a 'chamois (*guanaco*)', *pu*hura, 'a feather'. The Quichua *puhura*, 'feather', rather resembles our own *feather*, and the kindred Armenian *phetovr*, as well as the Georgian *phrthe*, 'wing', which contains the root of the Georgian *phr*inveli, 'bird'. In another Quichua word for 'feather, wing', *patpa*, *pat-* is well compared by Lopez with the Sanskrit *pat*, 'to fly', whence *pataga*, 'bird'.

'Bird'.

South America.	Old World.
	Burmah-Assam *uso.*
Botocudo *bacann.*	*patañ.*
	pettañ.
	Malay *ćićim.*
Quichua *puhura*, 'feather'.	*buroñ.*
	vuroñ.
patpa, 'feather'.	*piduñ.*
	pedo.
	peżi.
Quichua *piću.*	Africa *piǵ.*
	oruno.
	ukash.
	gata.

'Fish'.

South America . . . Quichua *ćallhua.*
Patagonian *ćalhoua.*
ćaoua.[1]
Bororo *aleu.*
Yagua *kioua.*
Juri *oöo.*
Tupi *pira.*
Coropo *herañ.*
Guana *haiheo.*
Uaenambeu *heića.*
Curetu *uai.*
Chibcha *gua.*
Cotoxo *hua.*
huan.
Hayti . . . . . Taino *guaycan.*
ican.

[1] D'Orbigny, *L'Homme Américain*, ii, 45. Where the reporter is French, *ou* will take the place of *u*, and of an English *w*.

'Fish'.

North America . . Attakapa *iagghan*.
Chinook *ikwaun*.
Ojibway *kekon*.
Mohawk *keiyunk*.
Kij *kwaiiñ*.
Yankton *hohuñ*.
Dahcota *hoa-ahug*.
Crow *booah*.
Maya *kay*.
Navaho *hloh*.
Palaik *alish*.
Sekumne *pala*.
Creek *tlakklo*.
Old World, Asiatic Esquimaux *ikahluk*.
salyuk.
Japanese *giyo* (cf. Chibcha *gua*).
Chinese *uwo*, *yu* } cf. Cotoxo *hua*, Juri *oöo*.
Finnish *qwele* (cf. Quichua *ćallhua*).
kalla.[1]
kala.
hal.
Samoyed *halea* (cf. Bororo *aleu*).
kale.
kola.
kolu.
Mongolian (Sokpa) *khele*, Turkish *baluk* } cf. Latin *halec*.
Siamese *pla* (cf. Sekumne *pala*).
para (cf. Tupi *pira*).[2]

[1] Cf. Tuschi *kal*mach, Georgian *kal*makhi, 'trout'.

[2] Other Brazilian words for 'fish', such as the Apinage *tebai*, the Chavante *tebe*, and the Timbira *thäpe*, are like the Georgian *thevzi* and

'Fish'.

Old World	Basque *arrai*.
	arrañ (cf. Coropo *herañ*).[1]
	Tuschi *ǵar*.
	African *yarei*.
	boari.
	eri.
	ero.
	ehere.
	ehei.
	ǵere.
	ǵe.
	eǵa.
	eshen.
	isañ, *ika* } cf. Hayti *ican*.
	iwak } cf. Attakapa *iagghan*.
Malay	*iwak*
	ikan (cf. Hayti *ican*).
	ulam.
	ilkait.
	ikal.
	kwau, *ehan* } cf. Kij *kwaiiñ*.
	ehak.
	bale (cf. Sekumne *pala*)
Polynesian	*paru* (cf. Tupi *pira*).
	ia, *ika* } cf. Uaenambeu *heića*.
Central India	*haku*
	kaku (cf. Ojibway *kekon*).
	kei (cf. Japanese *giyo*).

the Coptic *tebt*, 'fish'. In the Caraho (Brazil) tep-*rai*, 'fish', the final element, -*rai*, resembles the Basque *arrai*, 'fish'.

[1] And *herring*.

'Fish'.

OLD WORLD . . Central India *hai* (cf. Curetu *uai*).
ayo (cf. Japanese *uwo*).
keiye (cf. Yagua *kioua*).
N.E. Bengal (Dhimal) *haiya* (cf. Guana *haiheo*).
Accadian *kha*, *khan* } cf. Cotoxo *hua*, *huan*.

'Ant'.

SOUTH AMERICA . . . Chibcha *ize*.
Arawak *cussi*.
Zapara *quana-ckuno*.
QUICHUA *sisi*.
kkulluy, 'large ant'.
añallu, 'large winged ant'.
OLD WORLD . . . . . Basque *iñurri*.
inhurri.
chinhurri (=*ćinhurri*).
chindurri.
chingurri.
Central India (Kuri) *ćati*, 'black ant'.
ninder, 'white ant'.
Caucasus (Tuschi) *thanth*.
(Georgian) *ǧinǧveli*, 'dried ants' eggs'.[1]
Accadian *kisi*.
Nepalese *ćiǵi*.
ćig-yañ.
gaga ćimmo.
sikćemba.
ćampa-leu.
ćiki-bulla.
Southern India (Telugu) *ćeduttu*, 'white ant'.
ćima, 'black ant'.

[1] 'Ant' is deficient in Georgian.

'Ant'.

OLD WORLD.

Central India (Gayeti) *alu*, 'white ant'.
(Naikude) *sedal*, 'white ant'.
simal, 'black ant'.
Malay *samut*.
Tibetan *thoma*.
Butani *kyoma*.
Hungarian *hangya*.

The Telugu *ćima*, the Butani *kyoma*, and the Hungarian *hangya*, with the Nepalese compounds *ćig-yañ* and *gaga ćimmo*, are to be conjointly compared with the Zapara *quana-ckuno* in Ecuador, and the Taino *come-xon* in Hayti, which last word is, however, given doubtfully by Martius. The Nepalese *ćiǵi* seems identical with the Accadian *kisi*, the Arawak *cussi*, and the Quichua *sisi*: and, in the Japanese for 'ant', *ari*, we may have the final element of the Basque chind-*urri*, ching-*urri*, chinh-*urri*, inh-*urri*, and iñ-*urri*; from which last form, changing *r* into *l*, we pass to the Quichua añ-*allu*, while the Tuschi for 'ant', *thanth*, may supply the first element in these names, the Quichua *añ-*, and the Basque *iñ-*, *inh-*, *chinh-*, *ching-*, and *chind-*, all which might be identified also with the second element in a group of Aryan terms including the Armenian mër-*ǵivn*, 'ant',= Zend môir-*ina*,=Ossetic mäl-*ẓüg*, where such Basque forms as *ching-* and *iñ-* would unite the Ossetic -*ẓüg* to the Armenian -*ǵivn* (=*dshyn*) and the Zend -*ina*, while the change of the Quichua -*allu* and -*ulluy*, and of the Gayeti *alu* and the Telugu -*uṫṫu* in India, into the Japanese *ari* and the Basque -*urri*, is illustrated by the change of the Ossetic *mäl-* into the Armenian *mër-* and the Zend *môir-*, both = Persian *mûr*, Swedish *myra*, English pis*mire*, 'ant, emmet (=German *ameise*)'. The following table may, perhaps, assist the perception of analogies in these words for various kinds of 'ant':—

South America *i*——————*ze*.
si ——————*si*.
cu——————*ssi*.
kk——————————*ulluy*.
añ——————————*allu*.[1]
Nepal *ći* ——————*ǵi*.
Accadian *ki* ——————*si*.
India . . . . . *alu*.
će——————*d*——————*uttu*.
nin——————*d*——————*er*.
Japan . . . . . *ari*.
Pyrenees *iñ* ——————————*urri*.
chin ——————*g*——————*urri*.
chin ——————*d*——————*urri*.
Caucasus *than*——————*th*.

Another link between the Pyrenean and the Caucasian Iberian may be supplied by words for 'mouse', which is called:—in Basque, *sagu;* in Georgian, *thagvi;* and in Tuschi, *dachko*. The Quichua for 'mouse' is not given: 'rat' is *hukkuća*. One peculiarity of Basque animal-names is, that a considerable number of them have *r* terminations: thus we find:—

Basque *abere*, 'animal'.
acheri, 'fox' (in Quichua, *atok*).
achuri, 'kid, lamb'.
ahari, aari, ari, 'ram'.
chikhiro, 'sheep'.
zamari, 'horse', *i. e.*, 'beast of burden [(*zama*)'.
aker, 'he-goat'.
bigor, beor, 'mare'.
sokor, 'calf'.

[1] In *añ-*, and below in *nin-*, *iñ-*, *chin-*, and *than-*, an *anuswâra* termination may be given to the root.

Basque *chekor*, 'bullock'.
zakur, 'dog'.

With which we might compare :—

Friulian *cogar*, 'ass'.[1]
Georgian *ǵari*, 'ass'.
kuro, 'calf'.
qhari, 'ox'.
Accadian *char*, 'ox'.
Mingrelian *ǵoghori*, 'dog'.
Sanskrit *kukkura*, 'dog'.
Tupi *jagoara*, 'dog' (our word *jaguar*).
tapyira, 'ox' (our word *tapir*).
Accadian *dapara*, 'ox'.
Quichua *ahuara*, 'tapir'.
Tuschi *p'har*, 'dog'.
Cocama *yaware*, 'dog'.
Egyptian *wehere*, 'dog'.
Yula (Africa) *kukura*, *kura*, 'dog'.
Mobba (Africa) *sagar*, 'jackal'.
Fula (Africa) *ǵagere*, 'lion'.
faturu, 'leopard'.
Tibbu (Africa) *duguri*, 'lion'.
kadara, 'horse'.
Egyptian *hetere*, 'horse'.

The Quichua for 'dog' is *allko*, which would be the same as the Cuban *alko*, 'dog', and is like the Mandingo *ulo*, *ulu*, 'dog', in Africa, as well as the Rajmahali *allay* and the Uraon *alla*, 'dog', in India, with the Sinhalese *balla*, 'dog', in Ceylon. Cf. *bellen*, *heulen*, and *howl*. The Georgian for 'dog' is *zaghli*.[2] The Quichuas do not call the *jaguar* by that American name, which, as mentioned above, signifies properly

[1] My authority for this word is Dr. Michele Leicht, who compares with it the Sanskrit and Zend *khara*, and the Afghan and Persian *khar*, 'ass'.

[2] Cf. Styrian *zoaggl*, 'bitch' (Reinisch, p. 110).

'dog'; but they give it the name of *ćinka*, which resembles such African words for 'leopard' as *osiñka*, *iñko*, and *kiñgoko*, and such African words for 'lion' as *kinto* and *ǵanta*. There are one or two other analogies of the same nature between Peru and Africa. Thus the Quichua *kkarayhua*, 'lizard', is like the Sandoro *koro*, 'common lizard', and the Gbandi, Mende, and Tomo *koro*, 'large red-headed lizard'; and the Quichua *kkayru*, 'frog', is like such African words for 'frog' as *goro*, *kewuro*, *akere*, *ekere*, *ukere*. Another Quichua word for 'frog' or 'toad', *hampatu* or *ampatu*, bears some likeness to the Basque *apo*, 'toad'; as well as, in its last part, *-patu*, to the Tuschi *p'hit*, 'frog', the Basque *puka*, 'toad', the German *pogge*, 'frog, toad', and the English *paddock*. But where names may possibly be onomatopoetic, less stress should be laid on their agreement in sound.

CHAPTER IV.

THE QUICHUA AND OTHER AMERICAN LANGUAGES AGGLUTINATIVE, LIKE THE TURANIAN AND IBERIAN LANGUAGES—COMPARISON OF DECLENSIONS IN NOUNS AND PRONOUNS — ULTIMATE IDENTITY OF THE GEORGIAN AND BASQUE PRONOUNS FOR THE FIRST AND SECOND PERSONS—CONCLUSION FROM THE WHOLE EVIDENCE.

In support of the inferences to be derived from numerals, personal pronouns, and words of familiar use, the three branches of evidence which have occupied the two preceding chapters, it may now appear requisite that something should be added in reference to that most important test of linguistic affinity, grammatical construction. But, in the present case, this is needless for me to do, seeing that the work has already been satisfactorily done by others entitled to speak with authority upon such a question. It may, therefore, be sufficient, if I merely give two quotations in corroboration of my opinion, that the American languages, of which the Quichua is one, are to be ranked with the Turanian and the Iberian, whether the type of the Iberian be sought in the Caucasus or in the Pyrenees. It is true that, in the first quotation which I shall adduce, it is intimated, in opposition to my own views, that there is not "the remotest indication of a common origin" for the languages of America and the agglutinative languages of the Old World: but, if the numerals and words that I have compared together render it necessary to modify or abandon such a statement, and to admit that there is good reason, not to say strong reason, for the belief in such a common origin, then the argument to be derived in favour of that belief from the agreement of grammatical structure may be fairly pressed, and will give completeness to the whole demonstration.

My first quotation, then, is from Markham's *Quichua Grammar and Dictionary*, p. 60 :—

"It will have been seen that the most remarkable feature of the Quichua language is the power of constructing words by means of affixes or particles joined to the root, and thus providing for the formation of innumerable words, and even whole phrases. Du Ponceau called this mode of composition *polysynthesis;* and, as most of the American languages possess this faculty, he named them polysynthetic languages. Dr. Max Müller, however, considers this peculiarity to be nothing more than agglutination, as distinguished from the inflexion of the Aryan and Semitic languages. He, therefore, groups the American with the other languages which he calls agglutinative (a name given by William von Humboldt) in Asia and Africa, not because there is the remotest indication of a common origin, but from the absence of any organic differences of grammatical structure."

My next quotation is from Max Müller's *Lectures on the Science of Language*, vol. i, p. 320 (ed. 1), and bears especially on the resemblance between the American and the Iberian languages :—

"The Bulgaric branch" of the Finnish stock "comprises the Tcheremissians and Mordvinians, scattered in disconnected colonies along the Volga, and surrounded by Russian and Tataric dialects. Both languages are extremely artificial in their grammar, and allow an accumulation of pronominal affixes at the end of verbs, surpassed only by the Bask, the Caucasian, and those American dialects which have been called Polysynthetic."

To these statements I subjoin in illustration a comparison of declensions, choosing the word 'house' as the word to be declined. The analogy between the Quichua and any member of the Turanian group seems here as well marked as the analogy which unites that particular Turanian language

to the rest of the same group: indeed, it might be said that the Quichua comes as near to the Hungarian or Lapponic as either of those two members of the same Turanian family, the Finnish, do to one another. They will, therefore, immediately follow the Quichua in the comparison below:—

	Singular.	Plural.
	QUICHUA.	
Nom.	*huasi*	*huasi-kuna*
Gen.	*huasi-p*	*huasi-kuna-p*
Dat.	*huasi-pak*	*huasi-kuna-pak*
Acc.	*huasi-kta*	*huasi-kuna-kta*
	HUNGARIAN.	
	hâz	*hâz-ak*
	hâz-nak	*hâz-ak-nak*
	hâz-nak	*hâz-ak-nak*
	hâz-at	*hâz-ak-at*
	LAPPONIC.	
	wieso	*wieso-h*
	wieso-n	*wieso-i*
	wieso-i	*wieso-it*
	wieso-b	*weiso-it*
	JAPANESE.	
	iye	
	iye no	
	iye ni	
	iye wo	

The Japanese for 'house' is also written *ihe*, and is analogous to the Chinese *uh*, 'house', as well as to such Brazilian words for 'house' as the Curetu *uee*, the Omagua *uca* (also in Peru and Ecuador), the Tupi *oca* (whence *oca çui*, 'at home'), and the Mundrucu *öcka* (whence *öcka ütö*, 'at home'). See *ante*, p. 61. We now pass to the Iberian:—

BASQUE.

eche (or *iche*)	
eche-r*en*[1]	
eche-r*i*	
eche	

GEORGIAN.

chokhi[2]	*chokh-ebi*
chokhi-sa	*chokh-ebi-sa*
chokh-sa	*chokh-eb-sa*
chokhi	*chokh-ebi*

In the Tibetan, and in other Bhot languages, an *m* termination is affixed to the base of the previous words, which produces for 'house' the Tibetan *khyim*, and such words as the Nepalese *khim* and *dhim*, and the Gyarung *ćhem;* which may be compared with South American words for 'house' like the Botocudo *kjiemm* and *tiemm*, the Guayacuru *dimi*, and the Coropo *scheh-me* (*ante*, p. 61). The Tibetan *khyim* is thus declined :—

TIBETAN.

khyim	*khyim*-r*namas*
khyim-kyi	*khyim*-r*namas-kyi*
khyim-la	*khyim*-r*namas-la*
khyim	*khyim*-r*namas*

TURKISH.

ev	*ev-ler*
ev-iñ	*ev-ler-iñ*
ev-eh	*ev-ler-eh*
ev-î	*ev-ler-i*

Next to these Turanian languages may come the most Turanian of the languages classed as Aryan :—

[1] The *r* is merely euphonic here, and in the dative.
[2] 'Cottage', or 'hut'.

OSSETIC.

chaẓar	*chaẓar-thä*
chaẓar-üy	*chaẓar-th-üy*
chaẓar-än	*chaẓar-th-än*
chaẓar-üy	*chaẓar-th-üy*

So also we have in Ossetic, from the root *arf*, 'deep' (apparently allied to the Armenian *wirap*, 'a very deep ditch'), the nominative *arfade*, 'depth', with the accusative *arfadüy* or *arfadiy*. *Arfadiy* may be compared with the Lycian accusative, *êrafazeya*, 'tomb'; a word occurring in the following well-known bilingual inscription, in company with *prinafatu*, *tedêeme*, and *lade*, which have been analysed and compared above (pp. 60 to 76) :—

êwêeya	*êrafazeya*		*mête*	*prinafatu*	
	το μνημα τοδε			εποιησατο	
sedêreya	*pê . . . nêû*	*tedêeme*	*ûrppe*	*êtle*	*êûwe*
Σιδαριος	Παρμενοντος	υιος		εαυτωι	
sê	*lade*	*êûwe*	*sê*	*tedêeme*	*p . . . ê . . . lêyê*
και	τηι	γυναικι	και	υιωι	Πυβιαλητι

In placing the case-suffix after, instead of before, the plural suffix, the Ossetic is more like a Turanian than an Aryan language. But the German *häus-er-n*, as compared with the Latin *dom-ib-us*, presents the same anomaly. The Ossetic case-suffixes are like those of the Tuschi, who dwell in their vicinity :—

TUSCHI.

	Singular.	Plural.
Nom.	*Dal*, 'God'.	*Dal-i*
Gen.	*Dal-e*	*Dal-a*
Dat.	*Dal-en*	*Dal-i-n*
Acc.	*Dal*	*Dal-i*

This Tuschi word for 'God', *Dal*, I have compared elsewhere with the *diel*, *dil*, 'sun', of the Albanians, who may be

considered as the representatives of the ancient Illyrians. In the Toscan dialect of the Albanian, *kyën*, 'a dog', is thus declined in the indefinite and definite forms :—

TOSCAN.

	Indefinite.		Definite.	
	Singular.	Plural.	Singular.	Plural.
Nom.	*kyën*	*kyën*	*kyën-i*	*kyën-të*
Gen.	*kyën-i*	*kyën-ë-ve*	*kyën-it*	*kyën-ë-vet*
Dat.	*kyën-i*	*kyën-ë-ve*	*kyën-it*	*kyën-ë-vet*
Acc.	*kyën*	*kyën*	*kyën-inë*	*kyën-të*

If now, from the declensions of the Caucasian Tuschi, in whom we may recognise the Tusci of Ptolemy (lib. v, cap. 9), and also from those of the Albanian or Illyrian Toscans, both immediately preceding, we are next led to examine those of the ancient Italian Tuscans, or Etruscans, we shall find in them the regular marks of Aryan declension. At least this would be the case, if we may judge from the following inflections of what we may assume to be proper names in the Perugian Inscription; a monument which, however, is not bilingual, so that the inferences as to cases are not absolutely certain :—

ETRUSCAN.

Velthina	*Afuna*
Velthinas	*Afunas, Afunes*
Velthinam	*Afunam*

Similarly we have, in a Phrygian inscription, *materes* and *materan*, = Latin *matris* and *matrem*, = Sanskrit *mâtaras* and *mâtaram*.[1] The Etruscan and Ossetic are Aryan languages crossed with Iberian, as English is a German language crossed with French. But, in Etruscan, it is numerals instead of declensions that show the effects of Iberian intermixture. The converse is the case in Ossetic, where

[1] For this Phrygian inscription, as interpreted from the Armenian language, see my *Asiatic Affinities of the Old Italians*, p. 71.

all the numerals of the decade are regularly Aryan, with the exception of *far-ast*, 'nine'; and even that contains the Ossetic form of the Aryan 'eight', *ast*.

The *s* termination of the Aryan genitive bears some likeness to the termination of the Georgian genitive and dative, *-sa*. But this *-sa* seems rather the dative than the genitive suffix, for *shen*, 'thou', is thus declined in Georgian:—

Nom. *shen*
Gen. *shen-i*
Dat. *shen-sa* or *shen-da*

The plural suffix of the Quichua, as will have been seen above, is *kuna;* and it is well compared by Lopez (p. 98) with a Tibetan plural suffix, *kun*, a word signifying likewise 'all' in Tibetan. Lopez also compares the same Quichua plural suffix, *kuna*, with the Sanskrit *guṇa*, 'quality', *triguṇa*, 'triple', etc.: but the previous explanation from the Tibetan is manifestly preferable. And this Tibetan word, *kun*, 'all, whole, every', which is at the same time a plural suffix in that language, as *kuna* is in Quichua, may again be employed to explain another Quichua suffix, *nkuna*, implying 'every': thus from *huata*, 'year', is formed *huata-nkuna*, 'every year' (Nodal, *Gramática Quichua*, p. 210).

For pronouns, the Tibetan uses *ćag* as a plural suffix; and here there seems another analogy between the Quichua and the Bhot languages:—

	Quichua.	Tibetan.	Lohorong (Nepal).
'I'.	*ñoka*	*ña*	*ka*
		ñya	*ka-ña*
'We'.	*ñoka-ńćik*	*ña-ćag*	*ka-ćika*
	ñoka-yku	*ñya-ńǰo*	*ka-ći*
'Thou'.	*kam*	*khyod*	*hana*
		khe	
'Ye'.	*kam-ćik*	*khyod-ćag*	*hana-ći*
		khe-ńǰo	

In these pronominal forms, the Bhot members of the Turanian group seem to approach nearer to the Quichua than Iberian languages do. Of these Iberian languages, which, with the American and the Turanian, I consider to compose the great Scythian family of tongues, I here take as specimens the Basque and the Georgian, giving in each case the common and the agglutinative forms. These last will be recognised by the presence of a hyphen, which, in the actual languages, would be replaced by a verbal root. Thus, 'thou art' is in Basque *z*era, and in Georgian *kh*ar: 'ye are' is in Basque *z*era*te*, and in Georgian *kh*ar*th*. 'Thou' is, therefore, represented here in Basque by *z-*, and in Georgian by *kh-*; and 'ye', in Basque by *z-te*, and in Georgian by *kh-th*. The Ossetic plural suffix, *-thä* (*ante*, p. 145), may be compared with the Basque *-te* and the Georgian *-th*, which convert 'thou' into 'ye'.

Quichua.	Basque.	Georgian.
'I'. *ñoka*	*ni*	*me*
	nik	
	n-	*m-*
	-t	
		v-
'We'. *ñokanćik*	*gen-*	*ćven*
	gu	*gv-*
	guk	
		v-th
'Thou'. *kam*	*zen-*	*shen*
	z-	
	zu	
	zuk	
	hik	
	hi	*kh-*
		g-
'Ye'. *kamćik*	*zen-te*	*thchven*

	Quichua.	Basque.	Georgian.
'Ye'.		*zuek*	
		z-te	*kh-th*
			g-th

By combining together the Georgian forms for 'we' and 'ye', given above, the full form for 'we' would come out as *ćventh;* and for 'ye', as *thchventh*. The Georgian pronouns of the first and second persons may therefore, as it seems, have been originally constructed thus. There would have been two bases for the first person singular, *me* and *ćven*, from which last would be derived the present genitive of *me*, 'I', namely, *ćem-i*, which implies *ćem*, 'I'. The two Sanskrit bases, *ma* and *aham*, may be compared with the Georgian bases, *me* and *ćven*. From the form *me* (=Basque *ni)* comes the Georgian prefix, *m-* (=Basque *n-*), as from the form *ćven* (=Lesgi *den*, 'I') would come the Georgian prefix, *v-*, with the Basque suffix, *-t*. The Georgian plural suffix for pronouns would be *-th*, thus giving *ćventh*, 'we', as the plural of *ćven*, 'I'; and from *ćventh*, 'we', may be derived the present Georgian form for 'we', *ćven* (with the Basque prefix, *gen-*), as well as the Georgian prefix, *gv-* (= Basque *gu*, 'we'), and the Georgian prefix-suffix, *v-th*. This Georgian *ćven*, 'we', which I have inferred to mean formerly 'I', with the actual genitive, *ćem*-i, '*me*-i', is like the Chinese *ćin*, *ćam*, "anciently used for I; now the royal we" (Williams' *Tonic Dictionary*). The second person singular in Georgian seems to have been originally formed from the first person singular, *ćven*, by prefixing *th*. Its full form would thus be *thćven* (cf. Sanskrit *tvam*), from which can be deduced the present Georgian form, *shen* (with the Basque prefix, *zen-*), and the Georgian prefixes, *g-* and *kh-* (with the Basque forms, *hi* and *zu*, and the prefix, *z-*). Finally, the second person plural in Georgian would be formed, as in the case of the first person, by the addition of

-th; and its full form would therefore be *thćventh*, which contains the present Georgian form *thchven* (with the Basque prefix-suffix, *zen-te)*, and the Georgian prefix-suffixes, *g-th* and *kh-th* (with the Basque prefix-suffix, *z-te)*. I dwell on these analogies between the Basque and the Georgian, because, if both languages are to be referred to one stock, the Iberian, we may be able to see at once how probable it is that the Pre-Aryan population of the countries which form the northern shores of the Mediterranean Sea was Iberian also.

Conclusion.

Having now brought the enquiry to an end, as far as the Quichua is concerned, it remains for me to point out the results which may be derived from the linguistic comparisons that have been instituted, in answering the questions propounded at the outset of our investigations (p. 5).

With regard to the first of those questions :—"By what route did the Americans pass from the Old World into the New ?"—nothing more than has been said need be said; as there is no good reason for deviating from the most common opinion, that the Americans as a body passed into the New World from North Eastern Asia.

The second question was :—

"To which of the races of the Old World are the Americans most nearly allied ?"

Six races may be mentioned in the world :—

1. The African or Ethiopian, now occupying the southern half, or rather the south-western half, of Africa.

2. The Semitic or Syro-Arabian, occupying (when taken in conjunction with the Sub-Semitic, or Libyan) the northern or north-eastern half of Africa, with Arabia, Syria, Mesopotamia, and Chaldæa.

3. The Aryan.

4. The Iberian, or Caucasian.

5. The Turanian.
6. The American.

The nearest affinities of the American race would be with the Turanians and the Iberians, and all three races might either be thrown into one under the name of 'Turanian,' or else, which may appear preferable, we might adopt the name of 'Scythian' for the whole race collectively, and employ the names of 'Iberian,' 'Turanian,' and 'American,' for its three subdivisions. In doing this, we should be carrying out and extending the idea of Rask, who divided as follows, about half a century ago, the race which he called 'Scythian':

Tartar (or Turkish).
North Asiatic (Finnish and Samoyed).
Mongol-Tungusian.
North American.

The inhabitants of South Eastern Asia have since been added to this class, but the claim of the Americans to be admitted into it has hardly been recognised, nor even, universally, that of the Caucasians.

Our previous six races are now reduced to four:—

1. African.
2. Semitic and Sub-Semitic.
3. Aryan.
4. Scythian (Iberians, Turanians, and Americans).

We have next to consider to which of the first three races the Scythian race is most nearly allied.

This is a more difficult question to decide; but it seems to me that the Scythians are, at any rate, less closely related to the Semites and Sub-Semites than they are to the Aryans and the Africans; and that, as far as their vocabulary is concerned, their connection is rather with the Africans than with the Aryans. Admixture alone is quite insufficient to explain the coincidences between African and Scythian words; nor is the idea of an affinity between Turanians and

Africans, as well as one between Turanians and Americans, at all a new one :—

"An extension of the Turanian family to these two continents (Africa and America) has been hinted at by several scholars. The Greenland language has been pointed out as showing a transition of Turanian into American dialects, and the researches of physical science have clearly indicated the islands east of Siberia, as the only bridge on which the seeds of Asia could have been carried to the New World. As to African dialects, all is still conjecture, except this, that, besides the Semitic type of some African languages, such as the Galla, spoken north of the Equator, there is another grammatical character impressed on other idioms, as, for instance, the Hottentot, which, by its mechanical perfection and artificial complication, invites a comparison with the grammatical system of the descendants of Tur."[1]

The degrees of relationship which unite the four great races of the globe may be conveniently represented by the following scheme, where each race would have its nearest kindred on both sides, and its remotest kindred opposite:—

ARYANS.

SEMITES and Sub-Semites } — SCYTHIANS { Iberians. Turanians. Americans.

AFRICANS.

As the Scythian languages seem most attached to the African languages by their vocabulary, but to the Aryans by their numerals, it becomes probable that the Scythians continued in contact with the Aryans after the Africans had disappeared from that quarter of the world where both Scythians and Aryans remained. And this brings us to our third question :—

[1] Max Müller in Bunsen's *Philosophy of Universal History* (1854), vol i, p. 484.

"In what part of the Old World was, most probably, the primitive seat of the ancestors of the Americans as a distinct race?"

We have already inferred that the Aryans and the Scythians remained for a long time in communication together during the early ages of mankind: and therefore, as the Aryans have been traced up to a single tribe, or even household, in Mount Imaus, we should be inclined to conjecture that the primitive seat of the Scythian race was in the same neighbourhood. The Yarkand country, on the east side of Mount Imaus, might be selected as a likely position for that primitive seat: and, as the Scythians spread abroad from such a centre as this, a time may have come when the little Aryan family was completely enclosed in its mountain-home by the three nations into which the Scythians became divided; the Iberians occupying the country between Imaus and the Caspian; and the Great Desert of Gobi, which so nearly cuts Central and Eastern Asia into two halves, separating the Turanians on the south from the Americans on the north. About this time, the Semitic nations may have been on the Euphrates, while the rest of the Old World, America being as yet unpeopled, was thinly overspread with scattered Africans; the African region then comprising Africa, Europe, Siberia, and the maritime countries of Eastern and Southern Asia. In Siberia and Northern Europe, however, any African population that may have existed must always have been extremely sparse, and would soon have been lost among the advancing Scythians. Of this Scythian stock, the Iberian branch, stretching out its arms towards the west, would take possession of Asia Minor and Europe, while Northern Asia would fall, in like manner, into the hands of the Americans; and while the Turanians, still on the south side of the Desert of Gobi, would be led from Tibet, by pursuing the courses of the great rivers, to the occupation of India and

China and South Eastern Asia. The next change would probably be, that the Americans would pass over into the New World from Northern Asia, being succeeded in Siberia and Tartary by a Turanian population, which may either have followed their steps from the common home of the Turanians and Americans on the east of Imaus, or else have taken a northerly course from some point or points in the enlarged Turanian area between Imaus and the Pacific.

When the Aryans, having multiplied in Imaus, at length emerged from its valleys, the Old World may have been thus peopled:—Africa, south of the Desert of Sahara, may have been occupied by the African or Ethiopian race, while the valley of the Nile and the coasts of the Mediterranean belonged to the Libyans or Sub-Semites, the Semites themselves possessing Arabia, Syria, and Assyria. The North of Europe, with Northern, Central, Eastern, and South Eastern Asia, including India (and with, perhaps, the addition of Iran or Persia), would have been Turanian; and the remaining and greater part of Europe, with Asia Minor, Armenia, and the Caucasus (and, perhaps, Iran), would have been Iberian. But, when the Aryans issued from Imaus, the advancing hordes of Celts, taking their route into Europe on the north of the Caspian and Euxine, and followed by Germans and Slavonians, would have confined the Turanian Fins to the extreme North of Europe, and the Iberians to the South of the same continent, where they held their ground, mingled with Aboriginal Africans, as Iberians, Ligyes, Tuscans, and Pelasgians. Finally, at a later period than that of the Celtic immigration into Europe, the Thracians, a branch of the Southern Aryans, having detached themselves from the Iranians, and deprived the Iberians of Armenia, where a Thracian language is still in use, pushed themselves eventually as far westward as Italy, if not farther, expelling, subduing, or incorporating with themselves, as they advanced, the previous Iberian popula-

tion. Yet in Asia Minor, under the protection of Mount Taurus, the Lycians still survived as a relic of the former Scythian possessors of the country, as the Basques still survive in the Pyrenees to represent the ancient Spanish Iberians. In Dacia, again, though the old Dacian language was Thracian, and akin to the Armenian, a previous Iberian occupancy seems, nevertheless, indicated by the termination of Dacian town-names, *-dava*, = Georgian *daba*, 'village'.[1] And, lastly, in Etruria, although the ruling language there is of Thracian origin, yet the important foreign element in the Etruscan vocabulary, including all, or very nearly all, the numerals, which are to be considered in the next chapter, still marks the co-existence of Ibero-Africans among the Thracians, not only, it may be, in Etruria itself, but likewise all along the route by which the Thracians advanced from the Caspian. Thus the Tuscans of the West became Aryanised through the instrumentality of the Thracians, and were succeeded by Thraco-Tuscans in Etruria, nearly as Celto-Ligyes and Celt-Iberians arose in Gaul and Spain under Celtic influence, and as the mixed race and language of the Ossetes has arisen in the Caucasus among the descendants of the ancient Tuscans, Ligyes, and Iberians of the East. Here, in the 'mountain of languages', as it is called, the Old Iberian still exists in many different forms; but nowhere else, except in the Pyrenees, is a true Iberian language to be heard. What the Celtiberian may have been, we do not know, but may suppose that it was Iberian rather than Aryan, and mixed with African.

Our fourth and last question was:—

"In what part of America are the nearest kindred of the Quichuas to be sought: or, in other words, who appear to stand to them in a relationship at all resembling that

[1] See *ante*, p. 72. So, also, the Dacian for 'tongue', δάλλα, appears Scythian, and = Patagonian *del*, Turkish *del*, *tel*, Australian *tale*, African *dali*, etc. (*ante*, p. 93).

which the Germans bear to the English, or the Welsh to the Irish?"

As far as this question can be answered, it has been so above (p. 50) in favour of the territory called New Mexico or Arizona; a country in which evidences of a former civilisation, analogous to that of the ancient Peruvians, continue to be found while I write.[1] In North America, it is the languages of California, New Mexico, and Texas, which have offered most parallels to the Quichua; and it is possible to identify all the ten Quichua numerals with those of the Tesuque, one of the Pueblo nations in New Mexico (*ante*, p. 50).

[1] A recent discovery of such antiquities is mentioned in a paragraph in the *Times* of the 8th of June, 1874, headed:—ANCIENT RUINS IN ARIZONA.

CHAPTER V.

THE NON-ARYAN ELEMENT IN ETRUSCAN, AS DETERMINED BY ETRUSCAN NUMERALS.

One subject still remains to be considered, in order to complete the design of the present work, as expressed in its title: nor can I here pass that subject over, although it is one which I have discussed on former occasions. For it has been inferred in the preceding chapters that the Basque and the Lycian languages are both to be classed with that division of the Scythian tongues which I have called 'Iberian', and whose great home is now the Caucasian regions. And this connection of the Basque and the Lycian languages with those still used in the Caucasus was, as it may be remembered, partly made out above, by the apparent affinity of them all to the American, and especially the South American languages, together with the Japanese, the Chinese, and the South Turanian languages in general; one link between the Himalaya and the Caucasus being supplied by the Accadian, a Scythian tongue which Mr. Sayce has compared with the Basque, and which M. Lenormand would connect with the Finnish and the Turkish, to all three of which this Pre-Semitic language of Assyria would doubtless be allied, though probably by still closer ties to other languages, the linguistic place of the Accadian appearing to correspond with much accuracy to its geographical position.[1]

But, if Iberian varieties of speech once extended, as I have inferred, from the Caspian to the Atlantic, then not merely the Basque, but likewise the other Pre-Aryan lan-

[1] See the Accadian words cited and compared above, pp. 55, 60, 67, 70, 75, 90 (note 2), 113 (note 2), 117, 118, 125, 136, 139.

guages of the South of Europe would probably be Iberian: and such an affinity, if it existed, might be expected to disclose itself in the Non-Aryan element in Etruscan; for in that language, even though it is Aryan in type, as, at least, I am myself convinced, there is yet no doubt that an important Non-Aryan element is to be found. This is, indeed, sufficiently evinced by the Etruscan dice-numerals, some of which I have already noticed, and to which I will now return.

These numerals are, in their proper sequence, according to Campanari, *mach, thu, zal, huth, ki, sa:* but Mr. Isaac Taylor, who wishes to bring them into better accordance with Finnish, Turkish, and Siberian languages in general, prefers the following order for them:—*mach, ki, zal, sa, thu, huth.* Yet, even with this exchange of places in four out of the six numerals, a permutation made exclusively for the benefit of the Ugrian languages, those of the Caucasus would still retain a decided advantage over them, as may easily be seen thus:—

		2.	4.	5.	6.
SUPPOSED ETRUSCAN		*ki*	*sa*	*thu*	*huth*
FINNISH . .	Hungarian	*ke*ttö	negy	öt	*hat*
	Lapponic	*qwek*te	nelje	wit	*kot*
	Fin	*kak*si	neljä	wiisi	*kuusi*
	Syrianic	*kyk*	njolj	vit	*kvait*
TURKISH . .	Osmanli	*i*ki	*dört*	besh	alti
	Tshuvash	*i*kke	*dwatta*	*pi*lik	olta
	SAMOYED	*si*de	*tet*	samlik	mat
MONGOLIAN .	Sokpa	*hoyur*	*tir*ba	*tha*ba	tshorka
TUNGUSIAN .	Saugara	*zur*	*duye*	tonga	nyungu[1]
CHINESE .	Canton	*i*	*sze*	ʾñ	*luk*

[1] Of course this may be the same word as those which follow; but, since it only slightly resembles *huth*, I leave it unitalicised, as I also do the Basque *sei*, but not the Circassian *shu*.

		2.	4.	5.	6.
INDO-CHINESE .	Karen	*khi*	*lwi*	yaï	*khu*
	Burmese	nhach	*le*	ña	*khyok*
BHOT . .	Butani	nyi	*zhi*	ña	*dhu*
DRAVIDIAN .	Bhumij	*bar*ia	*upun*ia	monaya	turuya
	BASQUE	*bi*	*lau*	bost	sei
CAUCASIAN .	Circassian	*oh*	*tley*	*tpey*	*shu*
	Abkhasian	*vi*ba	*phshi*ba	*khu*ba	*f*ba
	. Lesgi	*ki*go	*uk*go	*su*go	antgo
	. Lazic	*zur*	*ot*kh	*khut*	*ash*
	Georgian	*ori*	*oth*khi	*khu*thi	*echvsi*
	. Ude	*pha*	*bip*	*kho*	*ukh*
	Tuschi	*shi*	*dhew*	*ph*khi	*yeth*kh

Although Mr. Taylor's order for these Etruscan numerals would thus bring together, as I wish to do, the Tuscan of Italy and the Tuscan of the Caucasus, which are analogous in all four cases, while the Finnish languages only resemble the Etruscan in two instances out of four, yet I cannot avail myself of such an expedient for my purpose, but must adhere to Campanari's arrangement, *mach, thu, zal, huth, ki, sa.* There is, however, it must be admitted, some option in the matter, as one assumption of identity has to be made to start with, if not more afterwards. That arrangement is to be preferred, which is in accordance with the usual relative position of ancient dice-numerals, and most consistent with itself and with *general* analogy. Thus, *thu* and *huth* are consistently inferred to be 2 and 2 × 2, as *two* and *twenty, duo* and *viginti, dwy* and *ugain,* are consistently inferred to be 2 and 2 × 10. Corssen, who holds that the Etruscan language, while borrowing many words from the Greek, is to be classed with the Latin, denies that the syllables on the six faces of the dice, and identical on both dice, are numerals at all, on the ground that no ancient dice have been produced where the numerals are expressed in

words: yet he takes the syllables in the same order as if they were numerals, and thus combines and interprets them (p. 806):—

mach	*thuzal*	*huth*	*cisa*	
Magus	donarium	hoc	cisorio	facit.
				fecit.[1]

Of course, ancient dice bearing inscriptions of similar meaning can be produced, though I am ignorant of their existence. But Corssen has another reason for denying the syllables on the dice to be numerals; for he has discovered that the first twelve of the Etruscan numerals are to be found, or are contained, in the following words, which he selects from various inscriptions:—

1. *eca, un-i.*
2. *teis.*
3. *tri-na-ch-e.*
4. *chvar-thu.*
5. *cuin-te.*
6. *ses-th-s.*
7. *setu-me.*
8. *uhtav-e.*[2]

[1] This is a good illustration of Corssen's system of interpretation, a system which could be applied with equal success to many languages. Thus an Armenian, while accepting the loan of 'Magus' as a sufficiently Oriental rendering of *mach*, would be supplied by his own language with the words, *tovzheal*, 'recompensed', *ovkht*, 'vow, prayer', and *khzê*, 'cuts', for the explanation of *thuzal*, *huth*, and *cisa:* and a Caledonian of the same class could employ the Gaelic words, *ud*, 'that', and *cis*, 'tribute', after the manner in which Corssen has availed himself of the Latin words, *hoc* and *cisorium*, and so gain for *huth cisa* the meaning of 'id tribuit'; the subject of the verb, and donor of the dice (if cubes without numerals can be called dice), being *Mach-thuzal*, 'MacDougal'. The objection, that *g* ought not to correspond to *z*, is obviated by Corssen, who, as will be seen immediately, considers that the Aryan 'ten' takes in Etruscan the two forms, *tes-* and *tecu-*.

[2] Probably the Etruscan form of *Octavius*, a name used in England, but not therefore containing the English 'eight'.

9. *nu-na-s.*
10. *tes-n-s, tecu-m-n-al.*
11. *tes-ne eca.*
12. *tes-n-s teis.*

A complete proof (*vollständiger Beweis*) of this is promised in a future volume, sections 568-570; but, as Corssen's first volume of a thousand pages only extends to section 289, we may perhaps be for some time without such a demonstration. When we come to consider, as we shall below, the statements of age in Etruscan epitaphs, we shall meet with only one of the above forms, *sesths*, and even there the reading is doubtful: but we shall, on the other hand, find three out of the six dice-syllables where numerals ought to occur. Of *tesn-*, which may mean 'ten', some notice will be taken at the end of this chapter, when I shall touch upon the Aryan element in Etruscan, though it is not my proper subject on this occasion. At present, and pending the arrival of the demonstration promised in Corssen's expected volume, let us proceed to deal provisionally with the syllables, *mach, thu, zal, huth, ki, sa*, as if they were the first six Etruscan numerals.

Of these, I shall first consider *thu*, 'two', *zal*, 'three', and *huth*, 'four', which are to be analysed thus:—

thu, 'two'.
za-l, 'one-two'.
hu-th, 'two-two'.

Here there would be two elements only; one of them being identical with our own *two*, and appearing under the four different forms, *thu, hu-, -th, -l;* and the other being *za-*, 'one', which would be identical with such Caucasian 'ones' as *sa, zi, zo*, and *ża*, and with such Malay 'ones' as *sa* and *ta*. The Etruscan *za-l*, 'three', is, in fact, like the Gebe (Malay) *tu-l*, 'three', to be identified with the Gebe *sa-lu*, 'one-two'; just as the Maori *to-ru*, 'three',

is = Maori *tahi-rua*, 'one-two', and as the Hawaii *ko-lu*, 'three', is = Hawaii *kahi-lua*, 'one-two'. From these Polynesian forms, besides, *kahi*-lua or *ko*-lu, and tahi-*rua* or to-*ru*, with the Saparua (Molucca) *o-ru*, 'three', we can easily pass to the Basque *hi-ru* or *i-ru*, 'three', and thus reduce the Basque and Etruscan 'threes' to the same category. Again, as our *two* assumes in Malayo-Polynesian 'twos' such forms as *dua*, *lua*, *rua*, and *hua*, so it might appear in Basque as *la-*, *-ru*, *-u*, and *bi;* and in Etruscan as *thu*, *-th*, *-l*, and *hu-*. In New Ireland, if we take into the account 'four' and 'eight', *ha-t* and *wa-l*, as well as 'two', *ru*, our *two* occurs under the forms, *ru*, *-t*, *-l*, *wa-*, and *ha-*; and the New Ireland 'three' is *tu-l*, as the Etruscan is *za-l:* so that this Malay language, spoken E. of New Guinea, thus gives us *ru*, *tul*, and *hat*, to compare with the Etruscan *thu*, *zal*, and *huth*, 'two', 'three', and 'four'. Yet, though these three numerals are to be identified in the two languages, we are, of course, not to infer that they were derived from the Etruscans by the Malays, or from the Malays by the Etruscans. Both nations would have obtained them from a common, and probably Asiatic, source at some remote period.

Now let us turn to the Caucasian 'twos', 'fours', and 'eights', given above (pp. 20, 21), and compare together the various forms which our *two* takes in them, and the forms which it takes in the 'two', 'three', and 'four' of the Etruscan dice, *thu*, za-*l*, *hu-th*, and in the Basque *bi*, hi-*ru*, *la-u* :—

	Etruscan.			Basque.			
	thu	*-l*	*hu-*	*bi*	*-ru*	*la-*	*-u*
	-th						
	Caucasian.						
Georgian	*-th*		*o-*	*-va*			*o-*
Circassian	*t-*	*-ley*	*oh*			*-ley*	*oh*
Tuschi	*shi*						

Tuschi	*dhe-*		*-w*		*-w*			*-w*
Abkhasian	*-shi*		*a-*		*vi*			*a-*
					ph-			
Andi	*će*		*-o*		*bo-*			*-o*
	-t-	*-l*			*bei-*		*-l*	
Avar	*ki*							
	-k							
	-t-	*-l*	*u-*		*mi-*		*-l*	*u-*
Ude					*pha*			
					bi-			
					-p			
					mu-			
Et., Ba.	*-th*	*-l*	*hu-*		*bi*	*-ru*	*la-*	*-u*

From this comparative table it appears that the Caucasus presents us with forms corresponding to all the four Etruscan forms of *two,* as well as to all the four Basque forms of the same numeral with the exception of *-ru,* which is so frequent in Malay, though it does not occur in Etruscan, unless perhaps in *zathru* (see *infra*), which may be 'eight'. I have already noticed (*ante,* p. 20, note 3) the change of *b* into *m* in the case of two Lesgi 'eights', the Andi *beitl*gu and the Avar *mitl*go, which have been resolved above into their component 'twos'; and I have compared *mi-t-l*go with a Californian 'eight', *ma-la-hua,* where we may recognise in *ma-* the Caucasian 'two', *mi-* or *mu-*; as we may in *-la-* the Basque 'two', *la-*, and the Etruscan 'two', *-l;* and in *-hua* the Polynesian (Mayorga) 'two', *hua,* the Etruscan 'two', *hu-*, and the Basque 'two', *-u.* The Gaelic *bh* and *mh,* both of which have nearly the sound of *v,* may intimate how the passage from *b* to *m* is effected. So, too, the ancient Lycian city of *Pinara* is now the village of *Minara;* and *Biarritz* is also called *Miarritz* (Van Eys, s. v. *biga, miga,* 'génisse'), while Klaproth gives both *żurav* and *żuram* as the Georgian for 'swim'. At all events, we may

see, if it were only from the Caucasian 'eights', *beitl*gu, *mitl*go, and *mugh*, that *two* exists in the Caucasus as *mi* and *mu:* and this leads to one mode of explaining and connecting the 'threes' which will presently be given below, although one of them, the Georgian *sa-mi*, with the Mingrelian *su-mi* and the Lazic *ǵu-m*, might possibly, as I have pointed out in my *Numerals*, be explained, not as 'one-two', but as 'two-one', as might also the Bhot *su-m*, *swo-m*, the Arracan *thu-m*, the Kumi *tu-m*, and the Chinese and Siamese *sa-m*, etc., 'three'. However this may be, it is impossible not to be struck by the following resemblances between the West and the East of the Old World, so closely in accordance with the result of our Lycian enquiries (cf. p. 66, etc.) :—

West.	'Three'.	East.
Mingrelian *sumi*.		Tibetan *sum*.
Georgian *sami*.		Siamese *sam*.
Etruscan *zal*.		Malay (Caroline) *tal*.
Basque *hiru, iru*.		(Saparua) *oru*.

To return to the explanation of the Georgian *sami* :—we can, I think, hardly detach *sami* from the other Caucasian 'threes' that will be found, together with those above, in the following table, in which *b* and *v* seem forms of 'two', like those ranked (*ante*, p. 162) with the Basque *bi*, and thus identical with the Basque and Malay -*ru*, and the Malay -*lu* and -*l*, in the 'threes' now about to be presented; 'threes' which are all to be resolved into 'one-two', but where, in the cases of the Etruscan za-*l* and the Malay ta-*l*, the first letter of *t*wo, *t*vai, *d*vi, is liquefied, and the second letter dropped, while the second letter of d*vi*, etc., is liquefied, and the first letter dropped, in the Georgian sa-*mi*, the Chinese and Siamese sa-*m*, and the Arracan thu-*m*. In Finnish 'threes', such as ko-*lme* and chu-*dem*, it is possible that both the first and second letters of *dvi* may be pre-

served; and I have, therefore, added Finnish 'threes' to the list, especially as in one of them, the Tsherimis ku-*m*, the Caucasian, Bhot, and S.E. Turanian form of 'three' is attained. It is only in 'three' that Finnish languages supply us with any parallels to the six numerals of the Etruscan dice, when taken in Campanari's order.

'Three',='one-two'.

S.E. Turanian——Chinese *sa-m*.
Tibetan *su-m*.
Siamese *sa-m*.
Khyeng *thu-m*.

Caucasian——Lazic *ǵu-m*.
Mingrelian *su-mi*.
Georgian *sa-mi*.
Lesgi *sha-b*go.
*kha-b*go.
*ta-v*go.
Ude *khi-b*.
Tuschi *qho*.[1]
Circassian *shi*.
Abkhasian *khi*ba.

Basque *hi-ru*.

Etruscan dice *za-l*.

Malay——Caroline *ta-l*.
Gebe *tu-l*.
Ende *ta-lu*.
Maori *to-ru*.
Saparua *o-ru*.
Hawaii *ko-lu*.

Finnish——Fin *ko-lme*.
Lapponic *ko-lm*.
Vogul *ko-rom*.

[1] Probably = *qhaw*: cf. Tuschi *dhew*, 'four', 2 × 2. The base of *qho* is *qha*.

Hungarian *ha-rom*.
Ostiak *chu-dem* (cf. Turkish *ü-ć*).
Syrianic *ku-jim*.
Tsherimis *ku-m*.

The Etruscan *zal*, 'three', can thus be identified, both in itself and in its two elements, with Malay and Caucasian 'threes'; and so also, as may have been seen above, and *ante*, pp. 20-22, can the Etruscan 'two' and 'four', *thu* and *huth*, be identified with Malay and Caucasian 'twos' and 'fours': for we have in Malay, by way of examples for 'two' and 'four', the Rotti *dua* and the New Ireland *hat*, = Ende *wutu*; and, in the Caucasus, the Tuschi *shi* and the Georgian *oth*khi, = Lesgi *uk*go. These three Etruscan dice-numerals, although they resemble corresponding Aryan numerals, such as the Irish *do*, *tri*, and *ceathar*, I take to be all of Iberian, or Scythian, rather than of Aryan origin. The likeness which they bear to their equivalents in the Malay family of languages is so close; and they may even be identified with the Chinese 'two', 'three', and 'four', *i*, *sam*, and *sze*, if the Chinese 'three', *sam*, be linked with the Caucasian and the Malay through the Georgian 'three', *sami*, and the Tibetan and Nepalese *sum*, etc. In Mantshu dialects, again, we have *ǵeio* and *ǵoua*, *elan* and *gilañ*, *duye* and *tuye*, to compare with the Etruscan *thu*, *zal*, and *huth*. And, though some Turanian languages, such as the Finnish, the Turkish, and the Dravidian, fall here below the Aryan in likeness to the Etruscan, yet it is, on the other hand, in favour of the hypothesis of a Scythian origin for these three Etruscan numerals, that they plainly resemble their Californian equivalents, the Talatui *oyo*ko, *teli*ko, *oissu*ko, and the St. Raphael *oza*, *tula*ka, *wiag*, in addition to the Lesgi *ki*go, *shab*go, *uk*go, and other corresponding numerals in the Caucasus, as well as in the regions from Tibet to Polynesia, both inclusive.

The other three Etruscan dice-numerals are:—*mach*, 'one';

ki, 'five'; and *sa*, 'six'. Of these, *mach*, 'one', may be referred, with the Greek *μι-*, to the Ancient Armenian *mi*, *mov* (=*mu*), *miak*, *mekin*, and the Modern Armenian *mêk*, 'one', with such African, Indian, and Indo-Chinese parallels as will be noticed presently: *sa*, 'six', may be referred to the Circassian *shu*, the Basque *sei*, or the Gaelic *sè*, 'six': and *ki*, 'five', to the Abkhasian *khu*ba, the Lesgi *shu*go, the Georgian *khu*thi or *khe*thi, and the Ude *kho*; all Caucasian 'fives' with or without suffixes, here left unitalicised. Additional analogies will be mentioned later.

It is important to observe, now that all the Etruscan dice-numerals have been traced to other languages, that, although the Malay came so near to the Etruscan in 'two', 'three', and 'four', yet Malay 'ones', 'fives', and 'sixes', such as *sa*, *lima*, and *anam*, have no analogy to the Etruscan *mach*, *ki*, and *sa*. But, on the other hand, every one of the six Etruscan dice-numerals, *mach*, *thu*, *zal*, *huth*, *ki*, *sa*, may be considered as either Iberian or Aryan, but especially Iberian, just as the first six Brahui numerals of Biluchistan, *asit*, *irat*, *musit*, *ćar*, *panǵ*, *shash*, are all either Dravidian or Aryan; although, in these Brahui numerals, it is 'one', 'two', and 'three', which are Non-Aryan, whereas, in Etruscan' it is 'three', 'four', and 'five', which appear to be Non-Aryan, while 'two' and 'six' might be either Aryan or Non-Aryan. In the Bhumij numerals of Central India, the Aryan intrudes upon the Scythian later than in Brahui: for it comes in with 'seven' instead of 'four', the Bhumij decade being:—*moy* (cf. Etruscan *mach*), *bar*ia, *ap*ia, *upun*ia, *monay*a, *turuy*a, *sath*, *ath*, *nau*, *das*. In the Uraon, another language of Central India, the Aryan comes in with 'five', as the Uraon decade is:—*unta*, *en*otan, *man*otan, *nakh*otan, *panǵe* gotañ, *se* (cf. Etruscan *sa*) gotañ, *sat* gotañ, *ate*, *no* gotañ, *das* gotañ. In the Rajmahali, a third language of Central India, the Aryan numerals begin with 'three'; and, in the Chentsu, all the ten numerals are borrowed from the

Aryan, with the exception of 'nine', which is *lo* or *tota*; *tota* being identical with Caldwell's primitive Tamil 'nine', *toṇbadu*; and *lo*, perhaps, being = Gondi *no*, *nau*, and therefore ultimately Aryan. In four Nepalese dialects given by Dr. Hunter, there is not even this one, or any other exception. The Madi of Central India has three different 'nines':—*nawe* (Aryan), *ermu*, and *tumadi* (Tamil), with a similar intermixture for 'seven', 'eight', and 'ten'. Indeed, the languages of India, whether they are Aryan in structure, as in the North, or Turanian, as in the South, derive their vocabularies from both sources. And so in Etruria, as in India and in Biluchistan, there are linguistic signs of Aryan intrusion upon an earlier race; that earlier race being Dravidian in India, and Iberian in Etruria. Nor are we without a domestic example, where the results of a like intrusion are exhibited in a manner similar to that of which instances have just been given; for, as I mentioned five years ago, and as is universally known, French numerals have, in games of chance, intruded in England upon the Anglo-Saxon. We number, in a pack of cards, the first six thus:—*ace*, *deuce* (or *two*), *tray* (or *three*), *four*, *five*, *six*; and in dice all the six numerals of French origin are in use. We can even detect among us more foreign intrusion than this; for we have, in the London street slang, a third set of numerals, which are neither of Anglo-Saxon, nor of French, but of Italian origin. They will be found in the *Slang Dictionary*, s.v. *saltee*; and four examples of them are:—*oney saltee* (= *uno soldo*), 'a penny'; *say saltee* (= *sei soldi*), 'sixpence'; *say oney saltee*, or *setter saltee* (= *sette soldi*), 'sevenpence'; and *say chinker saltee*, or *dacha oney saltee*, 'elevenpence'.

Up to this point, our attention has been entirely occupied by the dice-numerals in Etruscan; and even they have been more especially compared with the corresponding numerals in Aryan and Iberian languages. Now, therefore, in order

that the subject of the Etruscan numerals may be viewed as impartially and completely as possible, I must proceed to compare those dice-numerals with their equivalents in other families than the Aryan and the Iberian, and also to notice some Etruscan numerals besides, of which the value is probably known. With respect to these last, what I have to say is not entirely new, as I have considered them before in my *Asiatic Affinities of the Old Italians;* but the present work would be imperfect without such repetition, even if I had no additions and amendments to make, as I have. And on this occasion I shall adopt and enforce, for some words below, the explanations which I have suggested there (p. 51, note), and which are to be adopted in preference to those given in the text (pp. 41-45). The Etruscan numerals to be added to those of the dice, will be found, with three of them also, in the following statements of age, all taken from Etruscan epitaphs:—

1. avil XXXIII, . . . 'ætat. XXXIII.'
2. avils XXIX, . . . 'ætatis XXIX.'[1]
3. avils *huths kealchls*, . . 'ætatis LIV.'
4. avils *kis kealchls*, . . 'ætatis LV.'
5. avils *kis muvalchls*, . . 'ætatis XV.'
6. avils *machs mealchls*, . . 'ætatis XI.'
7. avils LX lupuke, . . 'ætatis LX obiit.'
8. avils XXXVI lupu, . . 'ætatis XXXVI obit'.[2]

[1] In *av-il-s*, 'ætatis', ='*æv*itatis', we have the root of the Armenian *av*-ag, 'elder', *yav*-itean, 'an age', and, probably, *av*-r, 'day, time, age', combined with the termination of the Armenian tes-*il*, 'aspect' (root *tes*, 'see'), and the Aryan genitive suffix, -*s*. Corssen makes *avils* stand sometimes for 'natus annos', and sometimes for *Avilius*, the name of a family of sculptors who execute many commissions for him in Etruria.

[2] The root of *lupu*, 'obit', or 'obiit', may be found in the Sanskrit *lup*, 'destroy', or *lûp*, 'kill'; in the Gaelic *lobh*, 'putrefy'; and in the Irish *lubha*, 'corpse'. But interpreters of the Classical School render *lupu* by λοπάs, as Lanzi, or by γλυφεύs and ἔγλυψε, as Corssen, his latest follower. In 6, *avils*, 'ætatis', is preceded, not by *lupu*, as it is in 14 and 15, but by . . *avenke lupum;* a form which I have rendered (*Asiatic*

9. avils *huths* lupu, . . 'ætatis IV obit.'
10. avils *huths muvalchls* lupu, . 'ætatis XIV obit.'
11. avils *thunesi muvalchls* lupu, . 'ætatis XVIII obit.'[1]

Affinities of Old Italians, p. 38) 'deponit corpus' ('deposuit' might be better), and compared with the Armenian expression, *avandê zhogin*, 'he gives up the ghost (*hogi*), he dies'; the root, in *avandê*, being the Sanskrit *av*, 'servare, tueri', whence come, not merely the Armenian *avand*, 'deposit', but also *avan*, 'village' (= Sanskrit *avani*, 'terra'), and ap*avên*, 'refuge, asylum, confidence'. Corssen's reading and translation here are as follows :—

m	*a . . a*	*vence*	*lupum*	*avils*	*(m)achs*
Marcus	Afuna	veno conduxit	γλυφέα;	Avilius	Magus
			sculptorem;		

mealchls
-culos (ἔγλυψε.)
(sculpsit.)

The form, lupu*m*, is valuable, being like Velthina*m* and Afuna*m* (*ante*, p. 146). The nominative, lupu*s*, 'cadaver, mortuus', seems to be found in *L. Veisi(ni) lupus*, which Corssen translates (p. 491) :—'Lars Veisinnius γλυφεύς (mortuus est)', thus making the death of the deceased to be understood, but not expressed, in his epitaph. Sculptors must have largely contributed to swell the Etruscan Bills of Mortality; for the ashes of another are recognised by Corssen (p. 651) in an urn from Toscanella bearing the inscription :—

Arnt	*Thana*	*lupu*	*avils*	*xvii*
Aruns	Tanas	γλυφεύς	natus annos XVII.	
		sculptor		

Here *avils* ceases to be a sculptor's name, *Avilius*, and assumes the second sense of 'natus annos'. The sculptor Aruns died young.

[1] Or, possibly, XIX instead of XVIII. Corssen reads here, *avils thuns shi muvalchls lupu*, and renders the whole epitaph thus, *avils* returning back from the sense of 'natus annos' to that of 'Avilius':—

Larth	*Arnthal*	*Plecus clan*
Lars	Aruntis filius	Plecus major (mortuus est).

Ramtha	*Sv.*	*Apatrual*		*Eslz*
Ramta	Suenia	Apatrua	matre nata,	Esa matre natus

zilachnthas	*Avils*	*thuns*	*Shi*
ex silice fabricans	Avilius	duerunt.	Si(lius?)
		dederunt.	

muvalchls *lupu*
-culos ἔγλυψε.
sculpsit.

It would be singular, if the bases of so many Etruscan words that

12. avils *machs semphalchls* lupu, . 'ætatis LXXI obit.'
13. avils *kiemzathrms* lupu, . 'ætatis . . obit.'
14. lupu avils *machs zathrums*, . 'obit ætatis . . I'.
15. lupu avils XVII, . . 'obit ætatis XVII.'
16. lupu avil XXIII, . . 'obit ætat. XXIII.'

That the forms italicised in the previous list are numerical, would appear from their following *avils* and *lupu avils*, or else coming between *avils* and *lupu;* situations where numbers expressed by known arithmetical signs are regularly found in other epitaphs. The six syllables on the six faces of the Etruscan pair of dice were in like manner inferred to be the first six numerals, because the faces of a die are universally known to be regularly numbered from 'one' up to 'six'. And, if there were any doubt left as to the correctness of the inference in each case, it would be removed by our finding, in the first, or else the only, italicised word of the above citations from epitaphs, three of the six syllables on the dice, with one additional word. For in 3, 9, 10, we find *huths*; in 4, 5, *kis*; in 6, 12, *machs*; and in 11, *thunesi*, which last, it may be observed, contains a fourth dice-syllable, *thu*. What are tombstones and dice likely to have in common except the first six numerals?

Let us, then, begin our examination of the numerical form in the epitaphs above, by dealing with the four words just mentioned, *huths*, *kis*, *machs*, and *thunesi*. Here *huths*, *kis*, and *machs* would probably be the genitive, or at least oblique, cases of *huth*, 'four', *ki*, 'five', and *mach*, 'one', the genitive suffix, *-s*, being both Aryan and Iberian: cf. Georgian *khe*, 'a tree', *khi-s*, 'of a tree', where *-s* would be an abbreviation of *-sa* (*ante*, p. 144). There is much more difficulty about the remaining word of the four, *thunesi* or

are combined with *avils* and *lupu*, should, as Corssen requires us to admit, terminate in *l*, and be followed by *-chls*, = Latin *-culos*, like *meal-chls*, *muval-chls*, *keal-chls*, and *semphal-chls*.

thuneshi, which is probably either 'eight' or 'nine'; for we have already got Etruscan numerals from 'one' to 'six', and *semph-*, as will be seen directly, is most likely to be 'seven', although, as we ought to infer nothing from similarity of sound, *semph-* might possibly be 'eight' or 'nine', instead of *thunesi* being so: but in that case the deceased Etruscan, whose age is given in 12, would have been eighty-one, or ninety-one, instead of seventy-one years old. Now, as *thu*, 'two', is one of the dice-numerals, it would appropriately supply the first element in *thu-nesi*, 'eight', or 'nine'; numerals which, as will have been continually observed, are frequently resolvable into 'four-two' or 'two-four', and 'four-five' or 'five-four'; or, ultimately, into 'two-two-two' for 'eight', and 'two-two-five' or 'five-two-two' for 'nine'. We can thus easily see why the first element in *thu-nesi*, whether it be 'eight' or 'nine', should be *thu*, 'two'; and probably, as *mach-s*, *ki-s*, and *huth-s* seem genitives, so *thunesi* would be one likewise, the actual numeral being *thu-nes*, and *-i* being a genitive suffix, which might be compared with the Aryan genitive (properly, locative) suffix, *-i*, the Tuschi genitive suffix, *-i* or *-e*, the Georgian genitive suffix (for pronouns), *-i*, and the Ossetic genitive suffix, *iy* or *üy*. Waiving, however, the question of the final vowel, let us take *thunesi* or *thuneshi* as the Etruscan 'eight' or 'nine'. If it be taken as 'eight', and divided into *thu-nesi*, it is in its entirety, as far as I am aware, without a parallel; though it would not be so in its component elements, *thu*, 'two', about which I need say nothing more, and *nesi* or *neshi*, 'four', which has such Finnish, Dravidian, and African parallels as those which follow :—

'Four'.

FINNISH——————Hungarian *negy* (=*neǵ*).
Ostiak *njeda*.
Fin *neljä*.
Syrianic *njolj*.

'Four'.

DRAVIDIAN ———— Malabar *nalu*.
Madi *nal*.
Karnataka *nalku* (*-ku* a suffix).
Irula *naku*.
Kota *nake*.

AFRICAN ———— Toma *nago*.
Koama *nase*.
Bagbalan *nose*.
Basa *nashi*.
Kambali *noshin*.
Bute *nasib*.

The initial *n* in these African 'fours', and perhaps in the Finnish and Dravidian 'fours' also, may be explained on the same principle as the *m* in the Georgian *sa-mi*, 'three', 1+2, or in the Lesgi *mi-t-l*go, 'eight', 2×2×2: that is to say, such forms as the Basa *nashi* and the Toma *nago*, 'four', are to be reduced to *na-shi* and *na-go*, 'two-two'. For the fundamental consonants of 'two' consist of a dental, *t*, *d*, and of a labial, *p*, *b*; and the 'resonant' of a dental is *n*, while that of a labial is *m*.[1] Since *n* is the 'resonant' of *d*, the Anglo-Saxon *nigon* and the Sanskrit *navan* may be quite identical, primevally, with the Lithuanian *dewyni*, 'nine', as likewise *n twos* may be with our own *two* (*ante*, p. 44, note). In the Mandingo 'four', *na-ni*, the 'resonant' of *t-*, 'two', would be twice employed.

It is thus possible to explain *thu-ne-si*, 'eight', as 'two-four',=2×2×2. But *thunesi* might be 'nine', or 'five-four', as well as 'eight', or 'two-four'. Now, if we take, from the African 'fours' just given, the Bute *nasi*b, where the final *-b* is a suffix, and prefix to it the great African 'five', *t-n* (*ante*, pp. 7, 8), we obtain the Bute *tenasi*b, 'nine', the nearest parallel to the Etruscan *thunesi*, if con-

[1] Reinisch, p. 401: see also p. 146.

sidered as 'nine', with the exception, in India, of the Savara *tiṅǵi*, = Telugu *tommidi*, = Primitive Tamil *toṇbadu*. Yet, as *thu* is 'two' in Etruscan, at least in my opinion, I hardly think that *thunesi* should be explained as 'five-four', as it must be if compared with the Bute *tenasi*b, 'nine', but that it would be better taken as 'two-four', ='two-two-two', and therefore as 'eight' instead of 'nine': or, if 'nine', then as 'two-two-five'. *Thunesi*, however, if it be thus explained as 'eight', has, to my knowledge, as before stated, no parallel as a whole; that is, if it be divided into *thu-nesi*, 'two-four'. But, if we divide *thunesi*, 'eight', into *thun-esi*, 'two-four', some parallels may be made out by the aid of American languages, although it is probable that such analogies may very generally be considered as accidental, even when viewed in conjunction with those which America presents to the Lycian and the Dacian. I will, nevertheless, proceed to give them, such as they are, and in that association with Asia Minor and South Eastern Europe, employing the aid of capital letters to indicate the parallels to *thun-*, 'two', a form that would be identical with the Tuschi *shin*, which is the base of the Tuschi *shi*, 'two', as appears from the oblique cases of that numeral, *shin*-na, *shin*-wa, *shin*-chi, and *shin*-go (Schiefner, p. 46) :—

Albanian (Toscan) *dyelym-të*, 'boys, children'.[1]
Lycian *tedêeme*, '*υἱός*'.
Brahui *celum*, 'brother'.
Burmese *thathami*, 'child'.
Japanese *kodomo*, 'child'.
Guayacuru *couttamo*, 'son'.
Galibi *tigami*, 'child, little brother'.
Coeruna *aetheme*, 'lad, *juvenis*'.
Patagonian *calum*, 'child'.

[1] The plural of *dyallyë-i* or *dyalyë-i*. Compare the Albanian *dyelym-të*, 'children', with the Ossetic *svällon-thä*, 'children'.

Patagonian *tudem*, 'little'.
del, 'tongue'.
Turkish *del*, 'tongue'.
DACIAN *dalla*, 'tongue'.
Fin *kieli*, 'tongue'.
Mongolian *khele*, 'tongue'.
Quichua *kkallu*, 'tongue'.
tapa, 'nest'.
Georgian *daba*, 'village'.
DACIAN *-dava*, '-ton, -ham' (*ante*, p. 72).
Tupi *taba*, 'village'.
tapyira, 'ox'.
ACCADIAN *dapara*, 'ox'.

	8, 2×2×2.	4, 2×2.	2.
Guato (Paraguay)	. . .	*de-kai*	DOUOUNI
Patagonian	WENE-*ke-ka*gue	*ke-ka*guy	*æeu*kay
ETRUSCAN	THUN-*e-si*	*hu-th*	*thu*
Rotti (Malay)	*fa-lu*	*ha-a*	*dua*
New Ireland (Malay)	*wa-l*	*ha-t*	*ru*
Gebe (Malay)	*wa-l*	*fa-t*	*lu*
Karekare (Africa)	*fi-fe-du*	*fe-du*	
Egyptian	*se*-SENN-*u*[1]	*fe-dewe*	*żawi*
Talatui (California)	*ka*-WIN-*da*	*oi-ssu*ko	*oyo*ko
Matatan (Africa)	. . .	*she-ze*	
Basa (Africa)	. . .	*na-shi*	*yewi*
Accadian	. . .	*sa-na*	*bi*

[1] We might also divide *sesennu* into *se-sen-nu* or *se-se-nnu*, 2×2×2: and the Dsawara *kishen* and *iyen*, with the Biafada *binehi*, on p. 176, might be divided into *ki-she-n*, *iye-n*, and *bi-nehi*. For *sesennu*, and for a great number of Egyptian words, I am indebted to the kindness of the Rev. F. C. Cook, Canon of Exeter, from whom an examination of the roots of the Egyptian language may shortly be expected, that will occupy a field of enquiry which I am not qualified to enter, and gladly leave to professed Egyptologists. I have also taken from Leo Reinisch many valuable Egyptian and African words.

	8, 2×2×2.	4, 2×2.	2.
Piskaws (British Columbia)	*tu*-WIN	*mu-shus*	*tkhaus*
Dsawara (Africa)	*ki*-SHEN	IYEN	*gbari*
Tesuque (New Mexico)	*kuh-beh*	ION-*ouh*	*kihyeh*
Biafada (Africa)	*wa-se*	BIN-*ehi*	*bihe*
Caroline (Malay)	*wa-l*	TAN	*ru*
Cunacuna (Darien)	*va-u-a*gua	*pa-ke*cua	*vo*cua
Sekumne (California)	*ta-p-wi*	*żi*	PEN
Yeniseian . . .		*zi*em	UNem
		sha-ya	KINA
Quichua (Peru)	*pu-ssa-k*	*tta-hua*	*ys*kay
Aymara (Peru) . . .		*pu-si*	*pa*
Kutani (Oregon)	*wa-wah-sah*	*ha-ẓah*	*ass*
St. Barbara (California)	*ma-la-hua*	*sku-mu*	*shkoho*
Lesgi (Caucasus)	*mi-t-l*go	*u-k*go	*ki*go
	*bei-t-l*gu	*bo-o*gu	*ć*egu
Pujuni (California)	*pe-ć-i*	*pehe-l*	TEENE
Berber (Africa) . . .		*ku-z*	THENat
			SIN
Tibbu (Africa) . . .		*ti-sur*	DIM
		de-'e	*do*
		fu-so	DUM
Houssa (Africa)	*ta-gwa-s*	*fu-du*	*bui*
Tungusian	*ǵa-k-fo*	*du-ye*	*ẓur*
	ǵa-p-KUN	*dy*-GIN	*ǵur*
Russian	*vo*-SEM*	*ć̣e-ture*	*dva*
Sanskrit	*a-sh*-TAN	*ća-tvâr*	*dva*
Kashkari	AN-*sh*	*ćo-d*	*ǵu*[1]
Gothic	*a-h-tau*	*fi-dvôr*	*tvai*
English	*ei-gh-t*	*f-our*	*two*
Welsh	*wy-th*	*pe-dwar*	*dwy*

[1] These, taken collectively, are the nearest Aryan parallels to the Etruscan *thunesi*, *huth*, and *thu*. But they are clearly derived from Sanskritic forms.

	8, 2×2×2.	4, 2×2.	2.
Breton	*ei-z*	*pe-var*	*deu*
Ude (Caucasus)	*mu-gh*	*bi-p*	*pha*
Abkhasian (Caucasus)	*a-a*ba	*ph-shi*ba	*vi*ba
Circassian (Caucasus)	*yi*	*t-ley*	*oh*
Basque	*zo-r-tzi*	*la-u*	*bi*
Lazic (Caucasus)	*o-vr-o*	*o-t*kh	*ẓur*
Mingrelian (Caucasus)	*r-uo*	*o-t*khi	*shir*i
Georgian (Caucasus)	*r-va*	*o-th*khi	*or*i
Suanian (Caucasus)	*a-r-a*	*wor-sh*thkh	*yer*u
Kol (India)	*i-r-li*a	*u*-PUNia	*bar*ia
Tuschi (Caucasus)	*ba-r-t*	*dhe-w*	*shi* SHIN
Bola (Africa)	*ba-kir-ei*	ke*ba-kr*	ke*taw*

It may be questioned whether the Tuschi *bart*, 'eight', is rightly resolved, as immediately above, into 'two-two-two'; for it seems, from the partial resemblance in sound, to have some connection with the Tuschi *wort*, 'seven', 2+5. Yet there is a similar assonance in the Ude *wugh*, 'seven', and *mugh*, 'eight', where *mugh* = 'two-two-two': and, as in 'ram, *aries*' (*ante*, p. 67), the Basque *ari* seems = Tuschi *airt*, = Georgian *verẓi*, so, in 'eight', the Georgian *rva* may = Tuschi *bart*, = Basque *zortzi*. The difference between the Basque and the Etruscan 'eights', *zortzi* and *thunesi*, when they are referred to Caucasian languages, nearly amounts to this:—the Tuschi *shin*, 'two', would be identical with the first element in *thun*-esi; and the Lazic *ẓur*, the Mingrelian *shir*i, the Suanian *yer*u, or the Georgian *or*i, 'two', with the first element in *zor*-tzi, where one 'two' may be considered entirely lost, as it is in the English *four*, = Gothic *fi-dvôr*. Or the Iberian and the Tuscan of the Caucasus may be thus connected with the Basque (B) and the Etruscan (E), the Iberian and the Tuscan of Spain and Italy:—

'Eight'.

'Two'.	B.	E.	'Two'.	
Tuschi *shi*	*z-*	*thun-*	*shin*	Tuschi.
Georgian *ori*	*-or-*	*-e-*	*oh*	Circassian.
Tuschi *shi*	*-tzi*	*-si*	*shi*	Tuschi.

The Etruscan *thunesi* and the Basque *zortzi* might thus both be Iberian 'eights', especially as many a link may have been lost in a long chain of Iberian languages stretching from Georgia to Spain, and as the difference between *thunesi* and *zortzi* is not more than what exists among the Caucasian 'eights', *ovro, ara, ruo, rva, bart, beitl, mitl, mik, mugh, aa,* and *yi,* all reducible to 'two-two-two'. But the nearest parallels to the Etruscan, simplified in some cases by the omission of suffixes, may be selected as follows from the list at p. 175, one (Aryan) being supplied by the Paropamisus, two by South America, one by North America, two by Siberia, one by Barbary, and one by the Caucasus; to which last I subjoin additional analogies which enable us to pass from the Caucasus to the Pyrenees:—

Kashkari *an-sh,* . .	'eight'.
Etruscan *thun-esi,*[1] .	'eight'.
Patagonian *wene-keka,* .	'eight'.
Guato *dououni-dekai,* .	'two-four'.
Sekumne *pen-żi,* . .	'two-four'.
Yeniseian *un-zi,* . .	'two-four'.
kina-shaya, .	'two-four'.
Berber *then-kuz,* or *sin-kuz,*	'two-four'.
Tuschi *shin-dhew,* .	'two-four'.

[1] Or *thune-si*, as the word might be divided. *Thun-*, or *thune-*, may be compared with our English *twain*, = Anglo-Saxon *tvegen*, 'two', = Old High German *zuene*, 'two'; and also with *twenty*, in Ossetic *in*sey, where *in-* = Kashkari *an-* in 'eight'.

Lazic *zur*, . . ‘two’.
Tshetsh . *di*, . . . ‘four’.
Basque *zor—tzi*, . . ‘eight’.

Let us now proceed from Etruscan units to Etruscan tens, and take up the following important group of numerical forms from p. 169 :—

6. *me-a-lchls*
5, 10, 11. *muv-a-lchls* } ‘tenth’s’, or 1 × 10.
3, 4. *ke-a-lchls*, ‘fiftieth’s’, or 5 × 10.
12. *semph-a-lchls*, ‘seventieth’s’, or 7 × 10.

Here *semph-*, if taken to mean ‘seven’, which is the most likely interpretation, would have Aryan parallels in the Latin *septem* and the Russian *sem’*, and an Iberian parallel in the Georgian *shvidi*. These are, however, not very near; and several closer parallels are presented in the *Polyglotta Africana*, such as *sambe, sembe, shiampa, żimpi, tomva*, and others, all reducible to ‘five-two’, as I have pointed out in my *Numerals*, p. 23. And this African ‘five’, which thus enters into these ‘sevens’ under the forms, *sam-*, *sem-*, *shiam-*, *żim-*, and *tom-*, exists, as I have shown more completely there, and more briefly above (p. 8), as ‘five’ in Oregon, Alashka, Kamtshatka, and Tungusia ; so that it is not improbable that it may be recognised in the Samoyed *sam*lik, ‘five’, and *sa-ttä* (for *sam-ttä*), ‘seven’, 5+2 (cf. Tshuvash *dwa-tta*, ‘four’, 2 × 2). In this case, the *-lik* of the Samoyed sam*lik*, ‘five’, would be a suffix (cf. Tshuvash pi*lik*, ‘five’), of which we shall have to speak presently, when dealing with the last element in semph*alchls*. Yet the Samoyed *sattä*, ‘seven’, even if it contain the Samoyed *sam-*, ‘five’, cannot well be separated from such Turanian ‘sevens’ as the Finnish *seitse* and *het*, the Turkish *yedi*, the Chinese *ż’at*, and the Dravidian *yedu, yegu*, and *yellu;* from which we may pass to the Georgian *shvidi*, the Aryan *septem* and *hepta*, and the Basque *zazpi*. For, as Max

Müller has mentioned in Bunsen's *Philosophy of Universal History* (vol. i, p. 462), one Finnish 'seven' is the Ostiak *tabet* or *sabet*; "and Professor Schott points out that, as in the Aryan family *septem* has taken a secondary form *set*,... *sat* also may be but a secondary radical as compared with *sabat*. This would be a most extraordinary discovery, for it would actually restore the word for 'seven' to so primitive a state, that not only the Turanian, but the Aryan and Semitic languages might, in that case, be traced back to the very cradle of human speech." The resolution of 'seven' into 'five-two' makes this still easier to do, and assists us in tracing back American languages also to a primeval tongue; for the 'five' in question, as I have often urged (see *ante*, pp. 10, 11), is to be met with in the Natchez *shpedee*, 'five'=Natchez *ispeshe*, 'hand'; words which lead us on eventually to the Gaelic *spàg*, 'paw', the Abkhasian *shepeh*, 'foot', the Assyrian *sepâ*, 'the feet', the Chinese *shau*, 'hand', and the Suanian *shi*, 'hand', etc.

From such a primeval 'five', = 'hand',= 'fingers', of which the elements are exhibited in the Pawnee word for 'fingers', *has-peet*, and in the Basque *atz-beatz*, 'finger-finger'—from a 'five' like this, which we may represent by the consonants *sps* or *shvsh*, we have no difficulty in deducing, by the addition of *two*, such 'sevens' as the Basque *zaz-pi*, the Georgian *shvi-di*, the Latin *sep-tem*, the Finnish *sabe-t* and *sei-tse*, the Italian *se-tte*, the Samoyed *sa-ttä*, the Hebrew *she-ba'*, and the Berber *se-t*. Nor is it improbable that the Etruscan *sem-ph* might belong to the same category: for the Ude *pha*, 'two', would give the last element in *sem-ph-*; and *semph* might = *sebph* or *sevph*, just as the Georgian *sami*, 'three', is =Lesgi *shab*go and *tav*go, 'three', 1+2 (*ante*, p. 165), and as the *sab* of *sabbath* and *sabato* becomes *sam* in the French *samedi*. Indeed, since *-di* = *dies* = *day*, we may consider *samedi* as = *sabbath-day*, which will illustrate the proposed connection of the Etruscan

semph-, the Basque *zazpi*, the Georgian *shvidi*, and the Latin *septem*, etc., with the Natchez *shpedee*, 'five', and its parallels, when combined with our own *two*, = Gothic *tvai*, = Sanskrit *dvi*, *dva*, = Etruscan *thu*, = Basque *bi*, = Ude *pha*. And this is the explanation of the Etruscan *semph-* which I should be inclined to adopt, although it is evident that African 'sevens', such as *sembe*, resemble it more nearly than any other 'sevens'. Whether the Samoyed *sam*lik, 'five', may stand for *sab*lik or *sav*lik, I cannot say.

The same *s hand-five*, which we have just been tracing, seems to occur also in the following Accadian words:—*su*, 'hand', and *sha*, 'five' (cf. Lesgi *su*go, 'five', and Suanian *shi*, 'hand'); a-*s*, 'six' (but compare Lazic *a-sh*, 'six', apparently = Georgian *ech-vsi*, 'six'); and *sis*-na, 'seven'. Yet, while the Accadian *sis-na*, 'seven', has apparently the same 'five' as the Basque *zaz-pi* and the Coptic *sash-p*, 'seven', it seems to combine with it another, though perhaps not primevally different 'two', *-na* (see *ante*, p. 173), which may enter likewise into the composition of the Accadian 'four', *sa-na*, 2 × 2, where *sa-* seems identical with the second element in the Accadian *es-sa*, 'three', 1 + 2, as its first element, *es-*, 'one', may be explained from the Armenian *ez*, 'one', or the Suanian *esh*chu, 'one'. The actual Accadian 'ones' are given as *id* and *dis*, and the actual 'twos' as *kas* and *bi*, for which, as well as for *sa*, 'two', see the column of 'twos' given above (p. 158). But *ni-* occurs as 'two' in the Accadian *nis*, 'twenty', and is, like *-na*, to be compared with the Bhot 'twos', *ni*, *nyi*, *nai*, *na*yuñ, and the Indo-Chinese 'twos', *ni*, *ne*, *nha*ch, *nhit*; so that the two elements of the Accadian *sis-na*, 'seven', 5 + 2, are both to be recognised in the Singpho *si-ni*th, 'seven', the Garo *si-niñ*, 'seven', and, perhaps, the Sunwar *ća-ni*, 'seven'; as its second element is in the Burmese 'sevens', khwan-*nha*ch and khun-*nhit*, and its first element in such 'sevens' as the Chinese *ż'a*-t, the Samoyed *sa*-ttä, the Finnish *sei*-tse and

sabe-t, the Georgian *shvi*-di, and the Basque *zaz*-pi, with Aryan and Semitic 'sevens'.

The Accadian 'eight' and 'nine' have not come to my knowledge. Its supposed 'ten' will be noticed later. On the whole, its numerals, like its words, make it apparently intermediate between the Caucasian languages on one side, and the Bhot and Indo-Chinese on the other.

Whatever difficulty there may be in the first element of *semph*alchls, there is none in the first elements of *me*alchls, *muv*alchls, and *ke*alchls. For *ki* is 'five', and *mach* is 'one', in Etruscan, as we learn from the dice-numerals; and, in Armenian, *mi* and *mov*, as well as *miak*, *mêk*, and *mekin*, are 'one', and so also is *me-*, in *me-tasan*, 'eleven, *undecim*'. In Armenian, again, *-a-* is used as a connecting vowel, so that the language presents us with such forms as *chaṛ-a-sovn*, 'forty', *mi-a-pet*, '*μόν-αρχος*', and others of the same kind, just as the Etruscan presents us with the four numerical forms, *me-a-lchls*, *muv-a-lchls*, *ke-a-lchls*, and *semph-a-lchls*. In these there consequently remains only to explain *-lchls*, which may be divided into *lch-l-s*, and interpreted as 'ten-th's', if *lch* be 'ten', and *-l* the suffix which converted in Etruscan a cardinal into an ordinal number, as *-m* does in so many Aryan languages, of which the Afghan and the Ossetic deserve especial mention.

The analogies to *lch*, 'ten', will be found above (p. 95) under the Quichua word, *lloke*, 'left hand', to which, and to its kindred American words, *locau* and *looga*, 'foot', with their Turanian and African parallels, the Etruscan *lch*, 'ten', would stand in a position similar to that in which the English *-leven*, *-lve*, 'ten', stands to the Scotch *loof*, 'inner hand', or in which the Uigur *lava*, 'ten', does to the Lapponic *lapa*, 'foot-sole'. As found in the Etruscan, *lch* would probably be a word derived from Scythia, and implying primarily 'hand', 'foot', or 'limb', which last is the meaning of the Esthonian *like;* and then, in the second

place, 'number' in general, or some one number in particular. In this derivative sense, *lch* seems most fully represented by the Lapponic *lokk*-et, 'numerare, computare', *lokk*-eje, '*leg*ens, numerans', -*lokk*, 'unusquisque', and *lokke*, 'decem': but, even if originally a Scythian word, it would have passed into three Aryan languages, without reckoning the Etruscan; for it would supply the Polish *lik*, 'number', the Armenian *lok*, 'single', and the Lithuanian -*lika*, '-leven, -teen'.

From the same base, with the sense of 'number', and somewhat after the manner in which we say *number one* and *number two* for 'first' and 'second', may be derived the supposed Etruscan ordinal suffix, -*l*; the base *lch* being more perfectly preserved in the Tuschi ordinal suffix, -*loghe* or -*lghe*, as in *dhew-loghe*, 'fourth', and *phkhi-lghe*, 'fifth'. The Samoyed -*lik*, in sam*lik*, 'five', might likewise be a suffix, and = Polish *lik*, 'number', = Lapponic *lokko*, 'ratio, computatio', = Esthonian *luggu* (gen., *lo* or *lu*), 'zahl, zustand, art, beschaffenheit, lection, lied'.

It is in the previous manner that the Etruscan *lchl* would have to be explained, if interpreted 'tenth': but, if it be interpreted 'ten', then we should have to make *lch-l*, 'ten', = *lch* + *lch*, 'five + five', = 'hand + hand'; *lch*, 'hand', being = Quichua *lloke*, 'left hand', etc. Or *lch-* might = Lapponic *lokke*, 'ten', and -*l* might = the Samoyed suffix -*lik*, in sam*lik*, 'five'. In the Tuschi *wor-t*, 'seven', *t* would probably be 'five', as *wor-* seems = Abkhasian *vi*, Georgian *or*i, 'two'.

The Malay and the Ancient Tamil resemble the Etruscan in representing 'ten' by 1 × 10, or 'one decade'. Thus 'ten' is, in Malay, *sa-dasa* and *sa-puluh*; in Ancient Tamil, *oru-pakadu*; and in Etruscan, *mea-lchl* or *muva-lchl*. 'Deca-de, diz-aine, zehen-d' may be the true meaning of the Etruscan *lch-l*; and *me(a)lchl* may signify 'one decade', as *tasneak mi* does in Armenian, where also *me-tasan* is

'eleven', 1+10, a number rendered in Tamil by *padi(n)-onrru*, in Malay by *sa-blas*, and in Etruscan by *mach mealchl*.

We have still two Etruscan numerical forms to explain (p. 171, Nos. 13, 14). They are the second and third forms which follow here:—

avils XXXVI lupu.
avils *kiemzathrms* lupu.
lupu avils *machs zathrums*.
lupu avils XVII.

Here we have three words relating to number:—*zathrum(s)* or *-zathrm(s)*, *kiem-*, and *mach(s)*, which last we know to be 'one'. But what is *kiem-*? Is it 'five'? If so, it may be Aryan, and might possibly be identified with the *chiem* of the Perugian Inscription. Or, rather, as *ki* is 'five' in Etruscan, may we not suppose *ki-em-* to be 'five and', and compare ki*em*zathrms with such forms as πεντεκαίδεκα and fünf*und*zwanzig? If so, then *-em-* might = Ossetic *ämä* or *ama*, 'and', and *ki-em-zathrm(s)* be analogous to the Ossetic *du ämä sez* and *du ama insey*, 'two-and-twenty, twenty-two'. *Zathrums* or *-zathrms* is more difficult to interpret than *kiem*: but, if *thunesi* be 'eight', we should then possess all the Etruscan numerals from 'one' up to 'nine', with the exception of 'nine' itself; while in *zathrums* or *-zathrms* one Etruscan numerical form would remain unexplained. Could we put these facts together, and interpret *zathrums* as LXXXX? Ninety-five is indeed a great age to reach, even for "an old man", such as we know from his effigy that the deceased was, whose age is given by the words, *avils kiemzathrms lupu:* and, besides this, the form, *lupu avils machs zathrums*, would show that there was another person, who was ninety-one years old at the time of death.[1]

[1] Yet, in the *Times* of the 10th December, 1874, I find recorded the death of Mr. Benjamin Bond Cabbell in his 94th year, and of Mrs.

There is also the additional objection, that *zathrums*, except in the last letter, which is probably a case-ending, differs in form from *mealchls*, *kealchls*, and *semphalchls*, which would signify 1×10, 5×10, and 7×10; so that, even if *zathru* were 'nine', we should expect 'ninety' or 'ninetieth' to be *zathrulchl* instead of *zathrum*. But this is not a decisive objection. The Russian *sorok*, 'forty', is anomalous, when compared with *dvadtsat'*, 'twenty', and *tridtsat'*, 'thirty': and kea*lchl* might be 'fifty', and zathru*m*, 'ninety', in Etruscan, as vit*ymyn* is 'fifty', and ökmys*das*, 'ninety', in Syrianic, where *-ymyn* would = Fin *kymmen*, 'ten', and *-das* would = Syrianic *das*, 'ten'. Our 'fifty', again, is fif*tig* in Anglo-Saxon, and fimf*tigjus* in Gothic, while 'ninety' is *hund*nigon*tig* and nigen*hund* in Anglo-Saxon, and niun-*tehund* in Gothic; the last forms differing from the English, whereas in 'fifty' all the three Teutonic languages agree together. So, too, while the English thir*teen* is identical with the Latin tre*decim*, the English e*leven* is not identical with the Latin un*decim*. If we in England use both *-teen* and *-leven* for 'ten', and the Syrianians in Northern Russia both *-ymyn* and *-das*, the Etruscans might likewise use both *-lchl* and *-m*. In French, moreover, there is a differance in formation, though not a radical difference, between quin*ze* and *dix*-neuf; nor do *quatre-vingt* and *quatre-vingt-dix* follow the analogy of *trente*, *quarante*, *cinquante*, and *soixante*. As semph*alchls* follows the analogy of me*alchls*, etc., while zathru*ms* does not, *zathru* may be inferred to be a higher numeral than *semph*.

The difficulties connected with the interpretation of *zathrum* as 'ninety' are thus far from being insuperable. They are, however, considerable; and it is, therefore, with diffidence that I suggest, in the first place, such analogies to a

Herbst in her 97th. On the monument to the memory of Pope and his parents are the words, in reference to his mother, *vixit annos xciii.*

supposed Etruscan *zathru*, 'nine', as are presented among the following words:—

Tuschi	*żha*,	. .	'one'.
Ude	*sa*,	. .	'one'.
Circassian	*tley*,	.	'four', 2 × 2.
Lesgi	*mitl*go,	.	'eight', 2 × 2 × 2.
Georgian *sa*———	*mi*,	.	'three', 1+2.
Etruscan *za*———	*l*, .	.	'three', 1+2.
Basque	*lau*,	.	'four', 2 × 2.
Georgian	*oth*khi,	.	'four', 2 × 2.
Etruscan	*huth*,	.	'four', 2 × 2.
Suanian	*ara*,	.	'eight', 2 × 2 × 2.
Georgian	*rva*,	.	'eight', 2 × 2 × 2.
żkh———	*ra*	.	'nine', 1+2 × 2 × 2.
Etruscan *za*———	*thru*,	.	'nine', 1+2 × 2 × 2.
Basque bed-——	*eratzi*,	.	'nine', 1+2 × 2 × 2.[1]
	zortzi,	.	'eight', 2 × 2 × 2.
Lazic	*żur*,	.	'two'.
ćkh-———	*oro*,	.	'nine', 1+2 × 2 × 2.
	ovro,	.	'eight', 2 × 2 × 2.
Georgian	*ori*,	.	'two'.
Tuschi	*shi*,	.	'two'.
Etruscan	*thu*,	.	'two'.
Tuschi	*shin*,	.	'two'.
Etruscan	*thunesi*,	.	'eight', 2 × 2 × 2.

If *zathru* be accepted as 'nine', some explanation must still be attempted of zathru-*m*, 'ninety', or 'ninetieth'. Now, when we considered such Etruscan forms as kea*lchls*, we saw that *lch* and *l* were probably both derived originally

[1] The Basque *bed-*, in *bed-eratzi*, 'nine', would = Basque *bat*, 'one', = Basque *beatz*, 'finger, thumb', = Welsh *bawd*, 'thumb', = Armenian *boyth*, 'thumb', = Cornish *bez*, 'finger', = Gaelic *bos*, 'inner hand', = Basque *bost*, 'five', = Turkish *bez, vez*, 'five', = Finnish *wäze*, *wiisi*, *wiis*, *wit*, *öt*, 'five', = (probably) Caucasian *withi*, *athi*, *wit*, *itt*, 'ten'. See my *Numerals*, p. 14. Even if the Etruscan *thu* were 'five' (*ante*, p. 158), it could not belong to this group.

from some word for 'hand, number'; a word ramifying into the Dofla (Assam) *lak*, 'hand', the Polish *lik*, 'number', the Lithuanian -*lika*, '-teen', the Lapponic *lokke*, 'ten', with *lokk*-et, 'to number, to compute', the Armenian *lok*, 'single', and the Tuschi ordinal suffix, -*loghe* or -*lghe*, with -*t*, 'five', in wor-*t*, 'seven'. In like manner, an *m* instead of an *l* word of the same nature might supply the Siamese *mo*, *mu*, 'hand', the Annamitic *mot*, 'one', and *muöi*, 'ten', the Etruscan *mach*, *me*-, *muv*-, 'one', and -*m*, '-ty' (as in zathru-*m*), the Armenian *mi*, *mov*, *miak*, 'one', the Kol *mo*ya, 'five', in Central India, and the Georgian ordinal prefix *me*- (as in *me*-same, 'third'). The perception of these analogies may be facilitated, if they are presented in a tabular form :—

L hand.	*M hand.*
Dofla *lak*, 'hand'.	Siamese *mo*, *mu*, 'hand'.
Polish *lik*, 'number'.	
Lithuanian try*lika*, 'thirteen'.	
Lapponic *lokk*-, 'number'.	
lokke, 'ten'.	Annamitic *muöi*, 'ten'.
Etruscan muva*lchl*, 'tenth'; or—	
'ten', 1×10; or—	
'ten', $1 \times (5+5)$.	
	Etruscan zathru*m*, 'ninety'.
Tuschi wor*t*, 'seven', $2+5$.	Kol *mo*ya, 'five'.
wor*tloghe*, 'seventh'.	
qha*lghe*, 'third'.	Georgian *me*same, 'third'.
Armenian *lok*, 'single'.	Armenian *miak*, 'one'.
	mov, 'one'.
	*me*tasan, $1+10$.
	Etruscan *mach*, 'one'.
	*muv*alchl, 1×10.
	*me*alchl, 1×10.
	Annamitic *mot*, 'one'.
	Kol *mi*, 'one'.

As there may be an *l* suffix in the Etruscan muvalch*l*, 1 × 10, and kealch*l*, 5 × 10, so there would be an *m* suffix in the Georgian th-erth-*meti*, 'eleven' (*athi*, 'ten', *erthi*, 'one'), th-or-*meti*, 'twelve', 10 + 2, and th-khu-*meti*, 'fifteen', 10+5. There is a like superfluity in the Anglo-Saxon 'ninety', *hund-nigon-tig;* where *-tig*=English *-ty*=Gothic *-tigjus;* and *hund-*=Gothic *-tehund,*=Gothic *taihun*, 'ten', with *-d* as a final suffix.

Another way of explaining zathru-*m* or zathr-*um*, 'ninety', might be from the Basque, which has *amar*, 'ten', *ama*-bi, 'twelve', 10+2, and *em*-eretzi, 'nineteen', 10+9.

There is, however, a further, and perhaps a fatal objection, not only to the previous interpretations, but likewise to all the deductions in the present chapter: and this capital objection lies in the fact, that I stand condemned by Corssen as one of the *Sturm und Drang* followers of what he, with his happy talent for combining Latin and Greek into one language, is pleased to call *Etruskologie*. Of the Etruscological performances of myself and others, he says (p. xvi): —"Dass solche Versuche das Räthsel der Etruskischen Sprache zu lösen in den Kreisen geschulter und besonnener Forscher keinen Glauben fanden, war natürlich." The solution of this enigma was reserved for Corssen; and it may, therefore, be quite sufficient to dispose at once of the interpretations which I have suggested for the last two forms that we have been considering, if I merely cite from Corssen's work (p. 657) those which he has put forth, and which must "naturally obtain credit among all thoroughly learned and judicious enquirers", who are not to be misled, as I have unwarily been, by such delusive analogies as those which *avils xxxvi lupu* and *lupu avils xvii*, etc., present to the Etruscan forms in question, which here follow:—

1.	*avils*	*ciem*	*zathrms*	*lupu*
	Avilius	quietorium	διατορεύματα	ἔγλυψε.
				sculpsit.

2. *lupu* *avils* *machs* *zathrums*
ἔγλυψε Avilius Magus *διατορεύματα.*
sculpsit

Of course we must not complain of Corssen's dividing the numerical form, *kiemzathrms*, into *ciem zathrms*, any more than of his making, out of the six dice-numerals, the four words, *mach thuzal huth cisa*, for the sake of such an interpretation as:—'Magus donarium hoc cisorio facit' (*ante*, p. 160). We are further indebted to the powers of analysis and synthesis so skilfully applied to the treatment of Etruscan numerals, and still more to powers of divination rivalling in perspicacity those of the old Etruscan augurs, for another interpretation of the great Perugian Inscription; an interpretation which must fairly be confessed to deserve, as indeed do all the interpretations emanating from the same source, the meed of praise awarded by Micali, more than forty years ago, to two of Corssen's Italian predecessors in this ancient path of exegesis:—"Di questa grande iscrizione abbiamo due tentativi d'interpetrazione: si vuol rendere la dovuta lode agli eruditi spositori; ma il vero è, che dalle loro elaborate fatiche non altro può trarsi se non che una conferma certa della insufficienza del metodo d'esplicazione"[1] Were sound a guide to sense, a Hindoo ignorant of English might find Sanskritic numerals in the words, *eke, due, try, chatter, puncheon, sash, sept, east, nave, dash.*

Let us now look at our subject from two other sides. The analogies to Etruscan numerals which are supplied by Aryan and Iberian languages may have been sufficiently displayed above; and some African and Finnish analogies have also been noticed. But it is desirable to place these last analogies more thoroughly before the reader, in order that their amount and comparative value may be better

[1] *Storia degli Antichi Popoli Italiani*, vol. iii, p. 228.

estimated; and with this view I will proceed to put the Etruscan between two Finnish languages on the one side, and two African languages on the other, indicating by italics such resemblances as may deserve attention. The two African languages are from the region of Adamawa, which lies S. of Bornu, and E. of Guinea.

	Lapponic.	Esthonian.	Etruscan.	Momenya.	Basa.
1.	akt	üts	*mach*	*mo*	hi
2.	qwekte	kats	*thu*	*mbe*	*yewi*
3.	*kolm*	*kolm*	*zal*	*ntad*	*tatu*[1]
4.	*nelje*	*nelli*	huth	gboe	*nashi*
5.	wit	wiis	*ki*	*kie*	tana
6.	kot	kuus	*sa*	*tu*	*ǵihi*
7.	kietja	seitse	*semph-* (?)	*sembe*	*ǵendye*
8.	kaktse	kattesa	*thunesi* (?)	fo	*ndatu*
9.	aktse	üttesa	*thunesi* (?)	beo	*tindishi*
10.	lokke	*kümme*	mea-lch(l)	*gum*	opoa
50.	wita *lokke*	wiis küm-mend	kea-*lch(l)*	(caret)	(caret)

The Basa 'nine', *tindishi*, would = Basa *tana-nashi*, 'five-four', as the Basa *ǵendye*, 'seven', would = Basa *tana-yewi*, 'five-two', and as the Basa 'eight', *ndatu*, with the kindred Kamuku 'eight', *tundato* or *tundat*, would = Basa *tana-tatu*, Kamuku *taa-tato*, 'five-three'. The *d* in *tindishi* and *ǵendye* is merely a euphonic intrusion after *n*, as in the English *cinder* and the French *tendre* and *gendre*. I consider it right to notice these resemblances which the Etruscan *thunesi* (or *thunes*), 'eight', or else 'nine', bears to the Basa 'eight' and 'nine', *ndatu* and *tindishi*, and to the Kamuku 'eight' and 'nine', *tundato* and *tandashi*, or *tundat* and *tandash*; although, as none of these African numerals be-

[1] The Gura *tal* and the Dsuku *tsala* are still nearer to the Etruscan *zal*, and the Malay *tal*, *tul*, etc.

gin with 'two', I think such resemblances to be very likely accidental, like that which *thunesi* bears to the Dravidian 'nines', *tiṅǵi*, *tumadi*, *tommidi*, *ombadu*, *vombadu*, etc. Additional African 'nines' belonging to the same class as *tindishi* are:—Bute *tenasi*b, Dsuku *żunyo*, Mfut *tanyi*, Ndob *tani*, and Kandin (Sahara) *tisa*, from which we might pass to the Berber *dza* and the Hebrew *têsha'*, and thus be brought within the range of the Semitic languages, the last of the great families of human speech with which it seems necessary to compare the Etruscan. Having, therefore, already compared Etruscan numerals with their equivalents in Aryan and Iberian, and in Finnish and South African languages, I will now, in order to exhaust the subject to the best of my power, institute a like comparison between the Etruscan on one side, and the Semitic and Sub-Semitic on the other; selecting the Hebrew and Syriac as specimens of Semitic, and the Coptic and Berber as specimens of Sub-Semitic:—

	Etruscan.	Hebrew.	Syriac.	Coptic.	Berber.
1.	mach	echad	chad	ouot	wan
2.	*thu*	*shënaim*	*thëren*	*snau*	*thenat*
3.	*zal*	*shâlôsh*	*tholth*	*shomt*	*kerad*
4.	*huth*	arba'	arbo'	*fto*	*kuz*
5.	ki	châmêsh	chamesh	*tiou*	summus
6.	*sa*	*shêsh*	*sheth*	*soou*	*sedis*
7.	*semph-* (?)	*sheba'*	*shëba'*	*sashp*	*set*
8.	thunesi (?)	shëmôneh	thëmone	shmen	tem
9.	*thunesi* (?)	*têsha'*	*tësho'*	*psit*	*dza*
10.	*mea*lch	'asar	'asar	*met*	*me*rawed

These Semitic and Sub-Semitic resemblances to the Etruscan are not to be disregarded. They considerably outweigh the Finnish resemblances (*ante*, p. 190), which are, indeed, but slight: they rank at least on an equality with the Aryan resemblances: and it is only the Iberian

and the African resemblances that they fall behind. With regard to the Hebrew *sheba'* 'seven', a curious question arises. Is it to be classed with the South African *sembe*, or with the Coptic *sashp* and the Basque *zazpi*? It is with these last 'sevens' that I have classed it above (p. 10), where I have pointed out the ultimate identity of the Basque *zazpi* with Caucasian and Aryan 'sevens'. It may here be mentioned, that it is not quite certain that *semph-* is the Etruscan for 'seven'; for, while we have *avils machs semphalchls lupu* on one sarcophagus (Corssen, p. 659), we find on another, according to Corssen (p. 678), *lupu avils esals cez palchls*, where *esal(s)* would probably stand for the 'three' of the dice, *zal*, and *cezpalchls* or *kezpalchls* would take the place of *semphalchls*. What, then, is the true reading of the Etruscan 'seven'? Is it *semph-*, or *kezp-*, or, possibly, *sesph-*? Perhaps the last; for in the epitaph of a lad, as given by Fabretti, there occur the words, *avils sesphs lupuke*, 'ætatis . . . obit' (or 'obiit').[1] But here we are again uncertain: for in Fabretti's index he writes *semphs* instead of *sesphs*, while Corssen reads *sesths* (see *ante*, p. 161), and translates *avils sesths lupuke* by 'Avilius Sextus ἔγλυψε'. When I cited this epitaph in 1870, in my *Asiatic Affinities of the Old Italians*, I conjectured that *sesths* or *semths* might possibly be the true reading, as the epitaph is one on a lad, *jüngling*, *giovane*, whom we may suppose to have been in his *teens*. Yet I am not inclined now, as I was then, to compare the termination *-ths* (if *-ths* it really be) with the Aryan 'ten'; for the final *-s*, according to the analogy of other numerals in epitaphs, would be a case-ending, so that, if we divide into *ses-ths* or *sem-ths*, -'teen' would probably be *-th-*, and might be compared with the Georgian *athi* and the Tuschi *itt*, 'ten', of which

[1] *Lupuke* and *lupu*, if aorists, may be compared with ἔθηκε and ἔθη, the first of which = Phrygian *edaes*, and the second = Armenian *ed*, 'posuit'.

kindred forms, *athi* would supply the first member in the Georgian *th*-khu(meti), 'fifteen', and *itt* the last member in the Tuschi phkhi-*itt*, 'fifteen'. On the whole, it is possible that *sesth* or *semth* may be an anomalous form for XVI or XVII, as *zathrum* may be for LXXXX; but neither is it beyond the bounds of possibility that the stonecutter, in engraving the epitaph of this lad, may have omitted to cut *mealchls* after *sesphs* or *semphs*, VII. Were it a boy, and not a lad, no such supposition would be necessary.

Now that all the Etruscan numerical forms have been considered, it may be instructive to present in one view what are probably the ten members of the Etruscan decade, together with their equivalents in such other languages as may be thought not unlikely, from their position, to be within the pale of Etruscan affinity. I may, therefore, here recommend to notice the following parallels from regions lying on opposite sides of the Mediterranean, but touching each other on the east, and almost so on the west; as, after all that has been said before, the one-sidedness of the comparisons is not likely to mislead, although it may be as well to repeat my opinion, twice expressed before, that the African parallels to the Etruscan *thunesi*, 'eight', or perhaps 'nine', are likely to be no more than accidental resemblances, as their first element is 'five', and not 'two'. Yet an African affinity may, nevertheless, be reasonably claimed for *thunesi* by those who can hold, with Mr. Taylor, that the dice-numeral, *thu*, is not 'two', but 'five'. Cf. Kamuku *ta-nashi*, 'five-four'. If *thunesi* be 'nine', an opinion of which the probability is to be entertained, we must then admit that *zathru* or *zathr* may be 'eight' instead of 'nine', $2\times2\times2$ instead of $1+2\times2\times2$. In this case, we should have to make three 'twos' out of *za-th-ru*, *za-thr-u*, *za-th-r*, or *za-thr*, one 'two' being lost in *za-thr*, as it is in the Basque *zor-tzi*, 'eight' (*ante*, p. 177).

North.	'One'.	South.
Armenian *miak*		African (Undaza) *moko*
mêk		(Matatan) *moża*
mov		(Momenya) *mo*
mi		(Benguela) *mohi*
me-		(Bute) *moi*
Greek *μι-*		
Etruscan *mach*		(Angola) *mosh*
muv-		(Dsawara) *mo*
me-		(Melon) *moe*[1]
	'Two'.	
Tuschi *shi*		Egyptian *żawi*[2]
shin		Coptic *sn*au
Etruscan *thu*		Tibbu *do*[3]
thun- (?)		Berber *then*at
Mingrelian *shir*i		Syriac *thër*en
Georgian *ori*		African (Dsawara) *gbari*
Abkhasian *vi*ba		(Basa) *yewi*
Basque *bi*		(Balu) *ba*
Ude *pha*		(Papiah) *pa*
	'Three'.	
Etruscan *zal*		(Dsuku) *żala*
esal (?)		*ażala*
Circassian *shi*		*ażara*
Basque *hiru*		(Meto) *taru*
Tuschi *qho*		(Matatan) *taro*
Abkhasian *khi*ba		(Boko) *aro*
Ude *khib*		(Kandin) *kara*d
Lesgi *khab*go		Berber *kera*d
*shab*go		Hebrew *shâl*ôsh

[1] Also 'finger': see *ante*, p. 94, under the Quichua *maki*, 'hand'; and compare the following 'ones':—Annam *mot;* Cambodia *mue;* Pegu *moe;* Central India (Bhumij) *moy*, (Santali) *mih*, (Kol) *mi*.

Reinisch, p. 87.

[2] *Ib.*, p. 167 : cf. Tuschi *du*q, 'a pair'.

NORTH.	'Three'.	SOUTH.
Lesgi *tavgo*		Syriac *tholth*
Georgian *sami*		Coptic *shomt*

'Four'.

ETRUSCAN *huth*	Berber *kuz*
Georgian *oth*khi	Gonga (Nile) *auda*
	Houssa *hudu*[1]
	fudu
Abkhasian *phshi*ba	Coptic *fto*
Lesgi *ukgo*	Namaaqua *haga*[2]
boogu	Momenya *gboe*
Tuschi *bhew*	Bagba *gbe*
dhew	Tibbu *de'e*
Basque *lau*	
Ude *bip*	

'Five'.

ETRUSCAN *ki*	Momenya *kie*
ke-	
Georgian *khe*thi	
*khu*thi	
Ude *kho*	
Abkhasian *khu*ba	
Lesgi *shu*go	Pulo *ǵowi*

'Six'.

Circassian *shu*	Coptic *soou*
Basque *sei*	Basa *ǵihi*
ETRUSCAN *sa*	Momenya *tu*
Gaelic *sè*	Pulo *ǵego*
Latin *sex*	Hebrew *shêsh*
	Syriac *sheth*
	Houssa *shida*

[1] Reinisch, p. 236.

[2] *Ib.*

NORTH.	'Seven'.	SOUTH.
Georgian *shvidi*		Berber *set*
Latin *septem*		
Polish *siedm*		
Russian *sem'*		
Gaelic *seachd*		Egyptian *sechf*
		sefeche[1]
Basque *zazpi*		Coptic *sashp*
ETRUSCAN *kezp* (?)		
sesph (?)		
sesth (?)		
		Hebrew *sheba'*
semph (?)		Momenya *sembe*, 5+2.
		Yasgua *tomva*
		Basa *ǵendye*
		Dsuku *żumpiena*
		Marawi *żimpi*
		Mutsaya *żam*
	'Eight'.	
ETRUSCAN *thunesi* (?)		Dsuku *żunża*, 5+3.
		Kamuku *tundato*
		Basa *ndatu*
zathru (?)		
Suanian *ara*, 2×2×2.		
Lazic *ovro*		
Georgian *rva*		
Tuschi *bart*		Bola *bakirei*,4×2.[2]
Basque *zortzi*		

[1] Reinisch, p. 219.

[2] Cf. Bola (Senegambia) ke*bakr*, 'four', and ke*taw*, 'two', = Basa *yewi*, 'two'. If the Etruscan *zathru* were 'eight', *zathrum* would be 'eighty' instead of 'ninety', which would be rather an advantage. Two Iroquois 'eights' are like *zathru*:—the Cayuga *tekro* and the Nottaway *dekra*, in which the first element is clearly 'two', in Cayuga *tekni*, and

North.	'Nine'.	South.
Lazic *ćkhoro*, 1+8.		
Georgian *żkhra*		
Etruscan *zathru* (?)		
thunesi (?)		Basa *tindishi*, 5+4.
		Kamuku *tandashi*
		Dsuku *żunyo*
		Bute *tenasib*
		Ndob *tani*
		Kandin *tisa*
		Hebrew *têsha'*
Tuschi *iss*, 4+5.		
Ude *wui*[1]		

in Nottaway *dekanee*. In the kindred Tuscarora *nakte*, 'two', and *nakreuh*, 'eight', the initial dental of the Cayuga and the Nottaway is changed into its 'resonant'. See *ante*, p. 173.

[1] For these two Caucasian 'nines', see *ante*, pp. 41-44, where the Cayuga *tyohto* and the Mohawk *tihooton* may be added from North America to the list of 'nines' at p. 42. If, among Caucasian 'nines', the Tuschi *i-ss* = Tshetsh *i-sh* = Avar *i-tsh* = Andi *hogo-tshu* = 'four-five', it would then be the *s five* that enters into the composition of these 'nines': and, if we suppose the Etruscan *thunesi* to be 'nine', and resolve it into 'four-five', it would have the following parallels:—

Etruscan *thunesi*, 'nine', 4+5.	
Accadian . . .	*sha*, 'five'.
	sana, 'four'.
Lesgi . . .	*shu*go, 'five'.
Suanian . . .	*shi*, 'hand'.
Mantshu	*duin*, 'four'.
	diyin, 'four'.
N. America—Unalashka	*sikhin*, 'four'.
Adaihe	*sickinish*, 'nine'.
Catawba	*wunchah*, 'nine'.

When 'five', as in the Lesgi *shu*go, is nearly identical with 'two', as in the Tuschi *shi*, it is difficult to decide whether a word like *thunesi* should be 'eight' or 'nine'; for 'eight' may = 'two-two-two', while 'nine' = 'two-two-five'. It is probably from such a reason that the Timbuktu 'eight' and 'nine', *yaha* and *yaga*, are so nearly alike.

North.	'Ten'.	South.
Etruscan *mealch(l)*		Meto *mulogo*
muvalch(l)		Matatan *mulogo*
Lapponic *lokke*		
Esthonian *kümme*[1]		Muntu *kumi*[2]
Mordvin *kämen*[3]		Bornu *guma*[4]
Basque *amar*[5]		Houssa *goma*[6]
ama-[7]		Ndob *wum*[8]

'Eleven'.

Etruscan *mach mealch(l)*, 1+10.	Matatan *mulogo* na *moża*, 10+1.

The result of these comparisons seems to be, that the Non-Aryan element in Etruscan, as determined by Etruscan numerals, is to be referred to the African and the Iberian languages: and, of the two, little as we might have expected such a conclusion, the African languages can explain the largest number of Etruscan numerals. Indeed, if we interpret *thunesi* as 'nine', and take *semph* as the Etruscan 'seven', they can explain them all. This may be seen by the following extracts from the preceding table, to which I have subjoined 'nineteen':—

Etruscan.	African.
1. *mach*	Angola *mosh*
2. *thu*	Tibbu *do*
3. *zal, esal*	Dsuku *żala, ażala*
4. *huth*	Houssa *hudu*

[1] Cf. Kurile *kehmma*, *kima*, 'foot'.
[2] Cf. Kamtshatkan *kumnak*, 'five'.
[3] Cf. Bulom *komen*, 'foot-sole'.
[4] Cf. Gura *guma*, 'heel'.
[5] Cf. Australian *kamar*, 'thumb'.
[6] Cf. Banyan *gumen*, 'palm'.
[7] Cf. Borneo *kama*, 'hand'.
[8] Cf. Tasmanian *wan*, 'thumb'.

	ETRUSCAN.	AFRICAN.
5.	*ki*	Momenya *kie*
6.	*sa*	Basa *ǵihi*
7.	*semph*	Momenya *sembe*
8.	*zathru*	Bola *bakirei*
9.	*thunesi*	Basa *tindishi*
10.	*mealch(l), muvalch(l)*	Matatan *mulogo*
11.	*mach mealch(l)*, 1+10.	*mulogo* na *moża*, 10+1.
19.	*thunesi muvalch(l)*	*mulogo* na *tan* na mi*sheze*[1]

It is thus manifest, as far as numerals can make it so, that we need not resort to Semitic, and still less to Finnish languages, in order to trace to its source, or sources, the Non-Aryan element in Etruscan. For we see that this element, the Tuscan of Ancient Italy, as distinguished from the Tyrrhenian, of which last a few words must be said presently, is undoubtedly marked, at least in its numerals, by the same characteristics as the Basque language in general, which I inferred, two years ago, to be an Iberian, *i.e.*, a Caucasian language, that had taken up a number of African words from a primeval African population in Europe. The Aborigines of Italy and Spain were composed alike. Both were Ibero-African in their affinities.

The Basque for 'seventy' is not formed from 'seven', as the Aryan and the Etruscan 'seventies' are, but is expressed by 3×20+10, 'threescore and ten', *hirurogeitamar*, where *hiru(r)-* is 'three', *ogei-*, 'twenty', *t-* (=*ta*), 'and', and *amar*, 'ten'. This mode of reckoning is followed in the Caucasus, as well as in the Pyrenees. Thus we have, in Georgian, *ożi*, 'twenty', and *orm-ożi*, 'forty',='twice twenty', *ori* being 'two'; just as we have, in Basque, *berr-ogei*, 'forty',='twice twenty', *bi* being 'two'. Again, in

[1] =10 (*mulogo*)+5 (*tanu*)+4 (*sheze*). 'Nine' is *tan* na *dsheshe*, 5+4, 'four' being *dsheshe*, *sheshe*, and *sheze*.

Georgian, 'fifty' is *ormoż-da athi*, 'forty and ten', as, in Basque, 'fifty' is *berrogei-t-amar*, 'forty and ten'. So, likewise, we have, in Tuschi:—*tqa*, 'twenty'; *qhouz-tq*, 'sixty', ='thrice twenty' (*qho*, 'three'), in Basque, *hirur-ogei*, 3×20; and *qhoutqa-itt*, 'seventy', ='sixty-ten', in Basque, *hirurogei-t-amar*, 'sixty-and-ten'. Cf. French *soixante-dix, septante* being also used. Caucasian and Basque 'twenties' rank well together, as may be seen from the examples following:—

Abkhasian *e—shva*
Mingrelian *e—ći* } Colchian.
Lazic *ö --ć*

Georgian *o--żi* (Caucasian Iberian).
Basque *o --gei* (Pyrenean Iberian).
Ude *qa* (Ptolemy's Udæ).
Tuschi *t --qa* (Ptolemy's Tusci).[1]

Just as we may discern our own 'two' in the Aryan forms, *twen*ty, *vi*ginti, *ei*kosi, and *u*gain, so we may again recognise it above in *o*gei and *t*qa, from which would result, as a completer form, *to*, = Etruscan *thu*, Tuschi *shi*, Circassian *oh*. The Abkhasian *e-shva*, 'twenty', seems clearly enough = Abkhasian *vi*ba-*shva*ba, 'two-ten'.

Some Accadian numerals have partial analogies with those just cited. For *ge* is given, but with some doubt, as the Accadian 'ten', and *nis* and *us* are given for 'twenty' and 'sixty'. These lead to the following comparisons:—

[1] If, however, the Udæ and Tusci of Ptolemy be identified with the modern Ude and Tuschi nations, then they must have retired inland, as they may well have done, from the northern foot of the Caucasus to their present position. There is an ancient district called *Uti*, which is frequently mentioned by the Armenian historian, Moses of Chorene. It lies on the right bank of the Cyrus, while the province of Sheki, where the Ude villages lie, is on the opposite side of that river. Combine *Uti* with the Georgian *daba*, 'village', and we have nearly the Dacian town-name, *Uti-dava*.

Accadian	*ge*, . .	'ten'.
ni————————	*s*, . . .	'twenty'.
u————————	*s*, . . .	'sixty'.
as, ...		'six'.
Nepalese (Pahri)	*gi*, . .	'ten'.
ni, ...		'twenty'.
ni, ...		'two'.
(Serpa)	*ćuh*, . .	'ten'.
nyi————————	*shu*, . .	'twenty'.
Burmese	*shai*, . .	'ten'.
nhit————————	*shai*, . .	'twenty'.
khyauk——	*shai*, . .	'sixty'.
khyauk, ...		'six'.
Abkhasian	*shva*ba, .	'ten'.
e————————	*shva*, . .	'twenty'.
Mingrelian e————————	*ći*, . .	'twenty'.
Georgian o————————	*żi*, . .	'twenty'.
Circassian	*żey*, . .	'ten'.
Basque o————————	*gei*, . .	'twenty'.
Tuschi t————————	*qa*, . .	'twenty'.
Ude	*qa*, . .	'twenty'.
ukh, ...		'six'.
Lazic ö————————	*ć*, . . .	'twenty'.
ash, ...		'six'.

Sussana is given as the Accadian 'thirty'. It resembles the Sunwar (Nepal) 'thirty', *sa-si-san*, which is composed of the Sunwar 'ten', *sa-shi* (*-shi* being a suffix), and the Sunwar 'three', *sañ*. The same elements, *i.e.*, *sañ*, 'three' (cf. Georgian *sami*), and *sa*, 'ten' (cf. Circassian *żey*, Abkhasian *shva*ba), are found combined, not as 10×3, but as 3×10, in the Chinese *san-shih*, the Gyami *san-sa*, the Gyarung ka-*sam-si* (*ka-* being a prefix), the Tibetan *sum-ću*, and the Burmese *suñ-ćhe* and *thon-shai*, 'thirty'. The Accadian 'forty', *sanabi*, seems to begin with the Accadian

'four', *sana*, which would leave -*bi*, 'ten'. Among the Samoyedic words used between the Yenisei and the Lena, Dr. Hunter gives *bi* as 'ten', and tietta-*bi* as 'forty': but a word like the Abkhasian *shva*ba, 'ten' (cf. Sunwar *swai*ka, 100, Georgian *asi*, 100, Accadian *si*, 1000), might explain sana-*bi* and tietta-*bi*, 'forty', as well as the Caucasian e-*shva* and e-*ći*, 'twenty'. Finally, the Accadian 'fifty' is given as *qigushili*, which has no complete parallel: but, if we resolve it into *qigu-shili*, 40 + 10, it has some partial resemblances to the following 'fifties':—Sunwar *khak*-nishi-*sa*sika, 20 (*khal*-ka) × 2 + 10 (*sa* with two suffixes); Tengsa Naga mesuñ-annat-te-*thelu*, 40 + 10; and Kol bar-hissi-*gil*, 2 × 20 + 10. The Accadian forms for 'ten' or -'ty', *ge*, *su*-, -*s* and -*shili*, find parallels in the Indian and Himalayan 'tens' and '-ties', *gi*, *si*, *thelu*, -*thelu*, *gela*, -*gel*, -*gil*: and, on the whole, the Accadian language maintains its former place, as connecting the Iberian languages with those of the Himalaya and of South Eastern Asia. See *ante*, pp. 157 (note), 181.

The last of the resemblances among numerals which seems to call for any particular remark, is that which the Esthonian 'ten', *kümme*, the Basque 'ten', *amar* and *ama*-, and one Etruscan '-ty', -*m*, or -*um*, bear to the great Ethiopian or South African 'ten', of which one example has been cited above (p. 198) in the Muntu *kumi*, the immediate neighbour, in Mozambique, of the Meto and Matatan 'ten', *mulogo;* with others in the Houssa *goma*, the Bornu *guma*, and the Ndob *wum*, of Nigritia. The following analogies between Etruria and Africa may here be specially noticed:—

	'Two'.	'Ten'.	
Dsawara	*gbari*	*lum*	*lum* bari
Isuwu	*wewai*	*ilomi*	*gma* wai
Momenya	*mbe*	*gum*	*ñgum* mbe
			be*ñgum*
Pati	*mba*	*uwom*	pa*ñguom*

} 'twenty'.[1]

[1] In the *Polyglotta Africana*, numerals do not go beyond twenty.

	'Two'.	'Ten'.
Ndob	*be*	*wum*
Etruscan		zathr*um*, 'eighty', or 'ninety'.
		mealchl
Meto . . .		*mulogo*

If the analogies between the Trans-Saharic African and the Etruscan, together with the analogies which I have already considered in my *Numerals* (pp. 24-31) between the Trans-Saharic African and the Basque, should not be thought adequately accounted for—and I do not myself think that they are adequately accounted for—by the hypothesis of a common derivation of all races of men from Central or Western Asia, combined with the apparent preservation in Africa, more than elsewhere, of a large part of the primitive human vocabulary; but if such analogies should seem, in addition to this, to imply the existence in Europe, at some time, of an actual Ethiopian population—a population which was probably Pre-Scythian in date, as the Scythian population there, whether Iberian, as in the South, or Fin, as in the North, was Pre-Aryan; yet this would be quite in accordance with the views advocated in the present work, and previously in my *Numerals*, where I have proposed to assign the very strong African element or tincture in the Basque language to the Cynetæ of Herodotus, as his Iberi and Celtæ would supply the two other elements in that language. Such an Ethiopian population, if it should ever have existed on this side of the Sahara, may have been suppressed by subjection or expulsion:—in Northern Africa, by the Libyans or Sub-Semites; in the greater part of Europe, by the Iberians; in Siberia and Northern Europe, by the Americans and the Turanians; and in Eastern and South Eastern Asia, by the Turanians alone. Many problems in the history of the dispersion of mankind may be bound up with that of the Etruscan language, in which there possibly lie embedded some of the

words used by the early cave-dwellers and lake-dwellers of Europe, as their habitations, whether troglodyte or sublician, are still to be traced in Italy.[1] Even Etruscan numerals may intimate to us that they were employed by a mixed people; a nation, or agglomeration of nations, in which Ethiopian seem to have struggled with Iberian, and perhaps Aryan, languages for existence or supremacy. Nor could we discover, except from other monuments in the mysterious tongue of this mysterious people, what language it was that finally prevailed over the rest in such a struggle: and even then we are left in some doubt whether the fusion was complete—whether incorporation or extinction ever reduced the conflicting languages of Etruria absolutely to a single one, although we can see that they did not remain as distinct there, as they have done in Ireland, Scotland, Brittany, and the Pyrenees. Yet one language, a language of the great Aryan stock, does appear to have given form, as well as predominant substance, to Etruscan inscriptions, though overpowered by the African and the Iberian in Etruscan numerals: and this Aryan language would have been one of Thracian type, and thus a member of the same family as the Lydian, the Phrygian, and the Armenian; the Thracian family of tongues belonging, like the Persian and the Sanskritic, to the Southern or Asiatic branch of the Aryan stock. As I have pointed out in a former publication, as well as above (p. 169), such forms as *avils xxxvi lupu*, 'ætatis XXXVI obit' (or 'obiit'), and *lupu avils xvii*, 'obit ætatis XVII', seem to find their explanation from the Sanskrit and the Armenian, and would thus be Asiatic Aryan. The same, likewise, may be said of two other similar forms, *ril liii leine*, 'ann. LIII vivebat', and *ril leine lv*, 'ann. vivebat LV'. For *leine*, 'vivebat', would=Sanskrit

[1] See, among other authorities, Gastaldi's *Lake Habitations and Pre-Historic Remains in the Turbaries and Marl-beds of Northern and Central Italy*, which has been translated into English by Mr. Chambers.

alinât, 'he was dwelling', where the root is *lî*, 'dwell, live', and would be partly analogous also to the Armenian *linêr*, 'he was, he was living', a form which is like the Latin *poterat*, but where the root is *li* and the base is *lin*, as in Sanskrit. The Etruscan *leine*, on the other hand, is a form like the Greek (ἔ)*βαινε*. The Armenian *linel*, or *linil*, 'to be', has no aorist: but, if it had one, the conjugational *n*, as in Sanskrit, would be dropped, and the resemblance to the Etruscan *leine* would be lost. Again, the Etruscan *ril*, 'year', is allied to the Sanskrit *ṛitu*, 'a season', = Gaelic *raidh*, 'a quarter of a year'; the root of *ṛi*-tu being *ṛi*, 'go', = Armenian *ṛah*-el, 'to go', and the termination of *ril* being similar to that of the Etruscan *avil*, 'age', or, in Armenian, to that of *kathil*, 'to drop, a drop', and *aragil*, 'a stork'.[1]

[1] *Aragil* seems to be the same word as *argala*, the Hindoo name of the Adjutant Crane, and is apparently derived from the Armenian *arag*, 'swift', which would also explain the Etruscan *aracus*, 'hawk' (Hesychius), and the name of an Armenian rebel, *Aracus* (*Arakha*), in the Behistun Inscription. A much more famous rebel mentioned in that ancient record is *Gomates* (*Gaumáta*); and in a Lycian inscription (Fellows, p. 477) we meet with *Gomêteyêu*, the genitive of a proper name, followed by *zzemaze*, 'daughter' (in all probability); a word which may find its explanation above (pp. 63-66), where the Coretu *simagö*, the Cobeu *himaki*, and the Tecuna *temaakan*, signify 'filia' as well as 'filius'; and where the Chavante *simissi*, 'persona', = 'hominis proles', is still more like *zzemaze*. Extraordinary as it may appear, it will yet be seen that South America furnishes parallels to all the three terms of relationship in the following Lycian epitaph:—

ewuinu	*gopû*	*mête*	*prinafatu*	*pomasa*
this	tomb	here	made	Pomasa

êrteleyêsêu	*tedêeme*	*urppe*	*lade*	*êuwe*
of Erteleyese	*son*	for	*wife*	his

ofeite	*gomêteyêu*	*zzemaze*	*sê*	*tedêeme*
Ofeite	of Gometeye	*daughter*	and	children

êuweyê.
his.

Here *gopû*, 'tomb', seems = Georgian *kubo*, 'tomb', = Armenian *govb*, 'ditch', = Sanskrit *kûpa*, 'ditch', = Hebrew *gôb*, 'pit'.

Gomates, the Magian, came from the mountain *Arakadrish* in the

The Armenian *avt*, 'a ring', *i.e.*, 'a cycle', might also be compared with the Etruscan *avil*, 'age'. There is another Etruscan form, *avils tivrs sas*, 'ætatis . . . VI', in which *tivr* has been rendered 'day', as in Fabretti. Here the termination of tiv*r* is the same as that of the Armenian av*r*, 'day, time, age', where the root, as in the case of the Etruscan *av*-il, 'age', seems = Sanskrit *av*, 'grow, move': and the root of *tivr* would = Armenian *tiv*, 'day', = Sanskrit *div*, 'shine'. While the Etruscan ant*ar*, 'eagle' (Hesychius), may have the termination of the Armenian av*r*, 'day', the Armenian ang*t*, 'vulture', has that of the Armenian av*t*, 'ring', or of the Etruscan av*il*, 'age'. For *ant-*, = *ang-*, see *infra*, where Etruscan *frunt-* = Thracian βρυνχ- = Armenian *phṛëng-*.

This view of the Asiatic derivation of the Aryan and chief element in Etruscan is unintentionally favoured by several of Corssen's explanations of Etruscan words; although, as will have been seen, such explanations are not much to be trusted, inasmuch as they commonly rest, not upon analogy or some other solid ground of inference, but upon phonetic resemblances to Greek and Latin words; as, for instance, when he identifies *zathrums* with διατορεύματα

country of *Pishiyáuwádá*, which might perhaps = *Pisidia*, a mountainous region unsubdued by the Persians, were it not that Sir Henry Rawlinson (p. 234) considers that *Pishiyáuwádá*, whither another rebel flies for refuge with his cavalry after a defeat in Persis, was evidently within the limits of Persis itself. But this hardly seems to follow with absolute certainty from so concise a narrative.

In the Behistun Inscription, the imperfect tense is continually used where an aorist might be expected: thus it is said of Gomates, *huwa khshâyathiya abava*, 'ille rex fiebat', as we have in Etruscan, *ril leine*, 'ann(os) vivebat'; the Behistan *abava* being = Sanskrit *abhavat*, not *abhût*, as the Etruscan *leine* is = Sanskrit *alinât*, but with the augment deficient, as in the Armenian *linêr*. So, also, the Grison preterite forms, *fova*, *fovas*, *fova*, *fovan*, *fovas*, *fovan*, are more like to *abhavam*, *abhavas*, *abhavat*, *abhavâma*, *abhavata*, *abhavan*, than they are to *abhûvam*, *abhûs*, *abhût*, *abhûma*, *abhûta*, *abhûvan*.

(*ante*, p, 188), and interprets *zilach*nthas by 'ex *silice* fabricans' (*ante*, p. 170, note). For these reasons, only slight stress can be laid on several of the following Armenian analogies to the Etruscan, mainly taken from my previous works, and in which, for additional security, I have queried such of Corssen's renderings of the Etruscan as seem to me erroneous or very doubtful. Even in cases where those renderings may be right, the letter-changes would point away from the Latin and Greek to the Armenian. To connect Etruscan with Latin instead of Thracian is like connecting English with Welsh instead of German.

Etera, 'alter'. Armenian *ôtar*, *avtar*, '*other*, different'. Cf. Albanian *yatërë*, 'other'; Greek ἕτερος; etc. The Armenian *ôtarazgi* and *aylazgi*, 'foreigner', with *aylazg*, 'different, various', and several other words of the same formation, might be classed with *Pelasg*-us: only *pel-asg* would prefix to the Armenian *azg*, 'nation, race, sort', not the Armenian *ôtar*,= Greek ἕτερος, nor the Armenian *ayl*,= Greek ἄλλος, but the Armenian *wat*,= Greek παλαιός.

Sech, 'conjugio (?) prognata'. Armenian *żag*-il, 'to be born'; *żag*-el, 'to produce young'; *żag*, 'a young bird'. Cf. Albanian *zok*, 'a young bird'; also Lapponic *sakko*, 'offspring'; and Tuschi *shekh*-nil,= Georgian *shech*-nili, 'son'.

Farthana, *harthna*, 'filia' (?). Armenian *harsn*, 'spouse, bride, daughter-in-law'; *harsan*-ich, 'espousals, marriage'. In Armenian, '*f*ire' and '*f*ather' are *h*ovr and *h*ayr.

Farce, 'ferivit, occīdit' (?). Armenian *hark*-anel, 'to strike, to kill'; *ehar*, 'he killed' (root *har;* a second aorist, with the augment).

Losna, 'Mondgöttin'. Armenian *lovsin*, gen. *lovsni*, 'moon'; root *loys*, gen. *lovsoy*, 'light'.[1]

Suthina, 'hingesetztes Weihegeschenk, *ἀνάθημα*'. Ar-

[1] The Armenian *ov* is a Latin *u*, and the Armenian *iv*, which occurs under the next word, a Latin *y*. *Lovtetia* stands for *Lutetia*, and *Skivthia* for *Scythia*.

menian *zohovthivn*, 'a sacrifice'; root *zoh*, = Sanskrit *hu*, 'Diis offerre, sacrificare'.

In an often cited bilingual inscription, the Etruscan *trutnvt fruntak*, or *phruntak*, corresponds to the Latin *haruspex fulguriator*. About *fruntak*, or *phruntak*, 'fulguriator', there is obviously little difficulty, as it is clearly allied to the Greek *βροντή* and *βρέμω*; to the Sanskrit *bhraṇ, dhraṇ, raṇ*, 'sonare'; to the Proper Thracian *βρυνχόν*, '*κιθάραν*' (Hesychius); and to the Armenian *wrëngʻ*-el, 'to neigh', and *phṛëncʻ*-el, 'to neigh, to sneeze, to bellow, to cry'. In frunt-*ak*, 'fulguri-*ator*', the Etruscan termination *-ak* seems to correspond to the Latin termination *-ator*: compare the Armenian *loṙ-al*, 'nat-are', and *loṙ-ak*, 'nat-ator'; *khndër-el*, 'rog-are', and *khndër-ak*, 'rog-ator'. The corresponding Sanskrit termination is *-aka*. It is not so easy to explain *trutnvt*, 'haruspex', a word which, as may be mentioned in passing, presents that deficiency in vowels which is characteristic of Armenian, as of Etruscan, prose, and is exhibited just above in *khndrel* and *khndrak*, for so those words would be written when undivided, and in such a word as *dstrik*, the diminutive of *dovstr*, 'daughter'.[1] As the termination of trutn-*vt*, 'haru-spex', apparently corresponds to the Latin *-spex*, we may compare it, in Sanskrit, with the root *vid*, 'scire, percipere', and the termination *-vid*, 'sciens, gnarus'; which are respectively identical, in Armenian, with *git*-el, 'to know', and the kindred termination *-gêt*, gen. *-giti*. The Armenian *hnagêt*, 'an antiquary' (*hin*, gen. *hnoy*, 'old'), and *astṙagêt*, 'an astrologer' (*astṙ*, 'a star'), together with the Sanskrit *açvavid*, 'conversant

[1] The Aryan termination of dovs*tr*, daugh*ter*, etc., seems to occur in two words for 'son' or 'boy', not included in the common Aryan group of terms of relationship. These two words are:—the Armenian ovs*tr*, 'son' (cf. *ovs*, 'learn'), and the Etruscan agalle*tor*, '*παῖς*' (Hesychius: cf. Lithuanian *waikėlis*, 'child'; Turkish *oghul*, 'son'; Georgian *akhali*, 'young'; Gaelic *ogail*, 'youthful').

with the qualities of horses' (Benfey), and *ǵyotirvid*, 'knowing the stars, an astrologer', would then be forms like the Etruscan *trutnvt*, which can thus be divided into *trutn-vt*, 'haru-spex'. Yet I cannot derive *trutn-*, 'haru-', from the Armenian; though *trutnvt* might easily be explained from that language as 'auspex' or 'augur'. For we have just seen that the Etruscan *frunt-* corresponds to the Armenian *wrëngǵ-* or *phṛënć-*, so that an Etruscan *trutn-* may correspond to the Armenian *thṛćovn*, gen. *thṛćnoy*, 'a bird'. The root of *thṛćovn* is *thṛ-*, 'volare',= Sanskrit *dru*, 'currere, fugere'; from which root, *dru*, we might obtain words for 'flying' resembling the Armenian *thṛćovn* and the Etruscan *trutn*, by adding one of the Sanskrit suffixes, *shṇu* (or *-ishṇu*), and *-tnu* (or *-itnu*); just as we have *bhûshṇu* or *bhavishṇu*, 'being' (Bopp, *V. G.*, § 947), and *gadayitnu*, 'loquacious' (Williams, *S. G.*, § 82). There are, besides, in Armenian, cases where *ć* and *ǵ* (*tsh* and *dsh*) seem replaced by *t* and *d*, as in the following expressions relating to various sounds and living things; forms which may serve to illustrate the Etruscan *fruntak* as well as *trutn-*, and in which all the words preceded by A., or not specified, are Armenian:—

ǵ, ć, ch, k, g.	*d, t, dh.*
Sanskrit *dhraṇ*, 'to sound'.	German *drön-*, 'to hum'.
A. *dṛnćivn*, 'tintement'.	A. *drndivn*, 'tintement'.
*dṛnć*il, 'tinter'.	*drind*, 'tintement'.
shṛinć, 'a noise'.	Gaelic *drannd*, 'a word'.
shṛnćivn, 'a noise'.	A. *shṛindn*, 'a noise'.
Gaelic *srannach*, 'humming'.	Gaelic *srannadh*, 'humming'.
Gaelic *srann*, 'to hum, to snore'.	Gaelic *sròn*, 'nose'.
Gaelic *ràn*, 'to roar'.	Sanskrit *raṇ*, 'to sound'.
Gaelic *ràn*aich, 'a roaring'.	Sanskrit *raṇita*, 'a sound'.
Greek *ῥέγχ-*, 'snore'.	Greek *ῥίν-*, 'nose'.
A. *hovnć*, 'breath, sound'.	

g̈, ć, ch, k, g.	*d, t, dh.*
A. *ovnć*, 'nose'.	Albanian *choundë*, 'nose'.[1]
ṛovngn, 'nose'.	
Thracian *βρυνχόν*, '*κιθάραν*'.	Greek *βροντή*, 'thunder'.
A. *phnć*el, 'to sneeze'.	
*phṛng*al, 'to sneeze'.	
*phṛnk*al, 'to sneeze'.	
*phṛnć*el, 'to sneeze'.	
*kṛnć*el, 'to cry'.	Etruscan *fruntak*, 'fulguriator'.
kṛinć, 'a cry'.	
kṛić, 'a cry'.	
*khṛnć*el, 'to make a guttural cry'.	
khṛćak, 'the throat'.	
hṛćak, 'a proclamation'.	A. *hrat*ar*ak*, 'a crier'.
haṛać, 'a groaning'.	*orot*, 'thunder'.[2]
	*oṛn*al, 'to howl'.
	Gaelic *torunn*, 'thunder'.
	Genoese *trun*, 'thunder'.
haṛaćivn, 'a groaning'.	
haćivn, 'a barking'.	
hnćivn, 'a noise'.	A. *thndivn*, 'a noise'.
*hnć*el, 'to sound'.	*thind*, 'a noise'.
	Sanskrit *dhvanita*, 'thunder'.
	Sanskrit *dhvan*, 'to sound'.
	Sanskrit *svanita*, 'the noise of thunder'.
	Sanskrit *svan*, 'to sound'.
	Sanskrit *kvaṇita*, 'sound'.
	Sanskrit *kvaṇ*, 'to sound'.

[1] See *ante*, p. 87. Compare also the Armenian *ovnkn*, 'ear', and the Quichua *rinkri*, 'ear' (p. 92).

[2] An *n* may be lost here, as in *tooth*, =*zahn*, =*dent*, =*ὀδοντ-*. Compare the next word to *orot*. *P* or *f* is lost in the Armenian *otn*, 'foot'.

ǧ, ć, ch, k, g.	*d, t, dh.*
	Sanskrit *kaṇ*, 'to sound'.
A. *khkhnǧivn*, 'a neighing'.	
wrnǧivn, 'a neighing'.	
mr*ǧivn*, 'an ant'.	A. or*dn*, 'a worm'.
khkhovn*ǧn*, 'a snail'.	gor*tn*, 'a frog'.
thṛćovn, 'a bird'.	Etruscan *trutn*, 'a bird' (?).
thṛić, 'flight'.	Georgian *tredi*, 'a pigeon'.[1]
*thṛć*il, 'to fly'.	Latin *turd(us)*, 'a thrush'.[2]
thiṛ, 'flight'.	Sanskrit *dru*, 'to flee'.
*thṛthṛ*el, 'to flutter'.[3]	

The analogies of *hnagêt*, 'an antiquary', and *astt agét*, 'an astrologer', enable us to see that *thṛćnagêt* would be a genuine Armenian word for 'auspex, augur', in the same manner as *thṛćnaban*, and *astt aban* (*ban*, 'λόγος'), are actual Armenian words for 'ornithologist', and 'astronomer' or 'astrologer'. The Sanskrit *dru-shṇu-vid*, or *dru-tnu-vid*, would come still nearer to the Etruscan *tru-tn-vt*, though the Sanskrit has formed no word for 'bird, *volucris*', like *thṛćovn* or *trutn*. The actual Armenian words for 'augur' are *havadêt* and *havaharẍ*, which are composed of *hav*, 'bird', *dêt*, 'observe', and *harẍ*, 'enquire'; from which last root (=Ossetic *färs-*, Zend *fraç-*, Latin *prec-*) is derived *harẍovk*, 'a diviner, a sorcerer'. The actual Armenian for 'haruspex' is *ënderahmay;* a word composed of *ënder(ch)*, 'entrails', and *hmay*, 'sorcery', from which comes *hmayeak*, 'a talisman', an-

[1] *Pigeon=pipio*, 'a young pigeon'. Compare the words for 'bird' given above, pp. 131-133. *Bird* is properly 'a young bird'.

[2] With us, *partridge* is 'bird', *inter aves turdus* (Martial, xiii, 92).

[3] The root, *thr-*, 'fly', might be identical with the root *phr-*, 'fly' (cf. θήρ and *fera*), whence come the Georgian *phr*-inveli, 'bird', and *phrthe* or *phrthi*, 'wing' (cf. *perdix*). In the Georgian *phrinavda*, 'he flew', we have another form like the Lycian *prinafatu*, 'he made' (pp. 76, 145, and 205, note), where the root is *pr-* (p. 70).

other form not unlike the Etruscan *fruntak*, 'fulguriator'.[1]

It is curious that an Armenian plant-name should resemble *thṛćnagêt*, and that an ancient Italian plant-name should have resembled *trutnvt*. The Armenian plant-name is *thrthnǧovk*, 'sorrel, *oxalis*': but cf. Armenian *ththov*, 'acid, sharp', *thovr*, 'sword', and *thovriǧ*, 'orange', = Persian *tûrunǵ*. The Italian plant-name was *tertanageta*: at least we find the following passage in Dioscorides, quoted by Grimm:—*ἀρτεμισία*. *Ῥωμαῖοι οὐαλέντια, οἱ δὲ σερπύλλουμ, οἱ δὲ ἔρβα ῥέγια, οἱ δὲ ῥαπίουμ, οἱ δὲ τερτανάγετα, Γάλλοι πονέμ, Δάκοι ζουόστη*. The Romans could easily have borrowed the name *tertanageta* from the opposite side of the Tiber, the "littus Etruscum", though to connect it with the Etruscan *trutnvt*, 'soothsayer', seems hazardous. But Grimm observes upon *μαντεῖα*, which Dioscorides gives as the Dacian name of *βάτος*:—"dies halte ich für das Gr. *μαντεία* auf *βάτος* bezogen, der *weissagende* dorn." Augury by the *dandelion* is practised among us: and, in Faust, Margaret divines by the *Sternblume*. At any rate, whatever be the derivation of the fifth Latin name for *ἀρτεμισία*, Ancient Italy seems to present us with two singular parallels to two Armenian words, one actually existing:—

[1] Armenia and Phrygia, like Etruria, were noted for haruspicy and augury, as we know from the sixth satire of Juvenal:—

> Spondet amatorem tenerum vel divitis orbi
> Testamentum ingens, calidæ pulmone columbæ
> Tractato, Armenius vel Commagenus haruspex (548-550).
>
> Divitibus responsa dabunt Phryx augur et Indus (585).

In relative position, as in affinity of language attested by ancient authors, Armenia was to Phrygia nearly what Rhætia was to Etruria. And, as Gauls crossed the Alps, and interposed between Rhætia and Etruria, so would Syrians (Cappadocians or Leucosyri) have crossed the Taurus, and interposed between Armenia and Phrygia. The original Iberian population had in each case previously retired:—in Italy, into Liguria and the Western Alps; and, in Asia Minor, into Lycia and the Western Taurus.

Etruscan *trutnvt*, 'haruspex'.

Roman *τερταναάγετα*, 'artemisia'.

Armenian { *thṛćnagêt*, 'avi-sciens', *i.e.*, 'augur'.
thrthnǧovk, 'oxalis': gen. *thrthnǧki*.

Returning from the digression caused by so important a bilingual inscription, I proceed to consider some more words as interpreted by Corssen:—

Tesns, 'deni, decem'. Sanskrit *daçan*, Armenian *tasn*, 'ten'.

Tular, 'sepulcrum'. Armenian *that*-el, 'to inter'; *thatar*, 'an earthen vessel'. Sanskrit *tala*, 'solum, fundus',=Armenian *that*, 'place, quarter, district'.

Canthce, '*ἐκέντησε*, cecīdit'. Armenian *chand-ak*-el, 'to cut, to engrave, to sculpture'. Sanskrit *khaṇḍ*, 'findere'. In chand*ak*-el we have another form like frunt*ak*.

Thuns, 'dederunt' (?), or 'duerunt' (?), Corssen allowing an option here, though none in *thuzal*, 'donarium'. Armenian *etovn*, Sanskrit *adus*, 'dederunt, *ἔδοσαν*'.

Nesl, 'mortuale, *νεκρικόν*' (? 'mortuus'). Sanskrit *naç*, 'mori'. Armenian *nash*, 'a bier'; *nekheal*, 'putrefied', where *-eal* is the termination of the Armenian preterite participle. *Nesl* would be the Etruscan equivalent of the Latin *necat*-us; as also *suth-i*, which sometimes precedes *nesl*, but frequently occurs without it, on Etruscan tombs, would be of *cond-itur*. For the Sanskrit has two root-forms signifying 'coacervare, submergi', *huḍ* and *huṇḍ*; and, of these, *huṇḍ* would=Latin *cond-*, as *huḍ* would=Welsh *cudd-*, Etruscan *suth-*, Armenian *sovz-*; the Welsh *cudd-* and the Armenian *sovz-* both signifying 'condere' or 'submergi'. Etruscan tombs inscribed with the words, *eka suthi Larthial Kilnia*, and *eka suthi nesl Tetnie*, indicate, not obscurely, the Aryan family to which the Tyrrhenians belonged; for of the two Armenian words, *nash*, 'bier', and *nekh*, 'putrescence', *nash* is the true Thracian form, as, in the Thracian

languages, the Sanskrit ç is sibilant. Thus *κενός* is *çunya* in Sanskrit, and *sin* in Armenian; and *δέκα* is *daçan* in Sanskrit, and *tasn* in Armenian.[1]

As the termination of the Armenian preterite participle, *-eal*, seems to be found in the Etruscan *nes-l*, so does the termination of the Armenian present participle, *-oṫ*, *-ôṫ*, or *-avṫ*, seem to occur in Lydian. For in the language of Lydia, whence the Tyrrhenians were derived by the ancients, *καυδαύλης* signified '*σκυλλοπνίκτης*' (Bötticher's *Arica*, p. 44), and would = Armenian *kheṫdavṫ*, '*πνίγων*', for which Bötticher gives *khendoṫ*. The Lydian base, *καυδ-*, and the Armenian base *kheṫd-* (or *khend-*), are found, as I have noticed long ago, in the Albanian *kyendis*, 'I choke', and in the Rhæto-Romance or Grison *candarels*, 'eine Art Drüsenübel, das das Athmen sehr erschwert'. A word in the languages of Armenia and Lydia is thus brought into Albania and Rhætia, in which last country an Etruscan dialect was once in use. The Lydian language is still further connected with the Armenian and the Sanskrit by the identity of the Lydian *νέος σάρδις*, '*νέον ἔτος*', with the Sanskrit *nava*, 'new', and *çarad*, 'year', which are found combined in *Navasard*, the ancient Armenian name for the first month in the year. In like manner, the Bebryces of Bithynia, who had a town with the Venetian name of *Patavium*, seem connected with the Bebryces of Roussillon by the apparent affinity of the French Pyrenean *sern*-eille, 'glacier', to the Armenian *saṛn*, 'ice', and *saṛ*-il, 'to freeze'.[2]

[1] For the termination of suth-*i*, 'cond-itur', compare the Armenian sir-*i*, 'am-atur', sovz-an-*i*, 'sese condit': and for *eka*, 'here', the Armenian *aha*, 'ecce', or the Georgian adverbs of place, *ach*, *acha*, *ich*, *icha*, *ichi*, 'here, there'.

[2] For Pre-Aryan words in the Alps and the Pyrenees relating to 'ice' and 'snow', see *ante*, p. 130, note 2. Among the Aryan words, in which the Piedmontese *ruize*, 'glacier', should probably be included, would be the Grison *vedretta* and the neighbouring Italian *vedretto*, 'glacier',= Gaelic *eithre*, *eidhre*, *eighre*, 'ice',=Latin *vitrum*; and also *firn* or *fern*,

All these Thracian nations, proceeding originally from Armenia, where the last Thracian language still survives, would have intruded, in Asia and Europe, upon a number of Iberian nations, of whom a list has been given above (p. 76); a fact that may be recognised, as far as Etruria is concerned, by the writer who is called Scymnus Chius, when he says (v. 217) that it was occupied in common by Pelasgians and Tyrrhenians, or, in other words, by Iberians and Thracians.

The Tyrrhenian language of Etruria, spoken probably by the Lucumones and the higher orders, and differing from the Tuscan, whence the Etruscan numerals would have been derived, seems best represented to us by the almost pure Armenian of the two hexameters on the Cup of Cervetri, to which I have devoted a chapter in my *Asiatic Affinities of the Old Italians;* an inscription which may tell us, when combined with other evidence, how it was an Aryan tongue from the northern frontier of Assyria, which eventually gained the ascendancy in Etruria, "the Asia of Italy," as it has been well called by Professor Bachofen, of Bâle.[1] The learned professor and myself have been led to corresponding results by two distinct courses of study, comparative mythology and comparative philology. Art has brought Mr. Fergusson to a like conclusion:—"The origin of Etruscan art is, beyond all doubt, Asiatic, and its original seat was some part of the countries between the Tigris and the

'nevé', *i.e.*, 'old snow',= Gothic *fairnis*, 'old',= German *firn*, 'of the last year'. *Glacier* is, of course, Latin. The snow-fields of the mountains thus bear their testimony concerning the races that have succeeded each other in Europe. When the *laui* or *lawine* falls, we seem to hear of Iberians; as also when the Carinthian peasant speaks of *kees*, or the Basque of *lei* and *kask*-arabar: *serneille* may tell of Thracians: *ruize* and *vedretta*, of Celts: *glacier*, of Latins: and *firn*, of Germans.

[1] *Die Sage von Tanaquil, Eine Untersuchung über den Orientalismus in Rom und Italien*, p. 352.

western coast of Asia Minor."[1] Such authorities as K. O. Müller and Dennis have also clearly seen a similar connection (Dennis, p. xlii); and Micali upheld, many years ago, the prevalence "dell' idee dell' Oriente nell' incivilimento, nella religione, e in certo modo nelle arti stesse degli antichi Etruschi."[2] The language of the Etruscans seems to me to come from the same region as their religion, their arts, and their manners and institutions in general. Everything that is Etruscan bears an Oriental stamp upon it.

Livy would have been substantially right when he said of the ancient inhabitants of the Alps, and particularly of the Rhætians (lib. v. cap. 33), that they were of Etruscan origin. Not that we are literally to suppose that the Alps were peopled from Etruria, even in its greatest extent; but that the original population of the Alps, like the original or Pelasgian population of Etruria, was Ibero-African; and that in Rhætia, as in Etruria, there was, in addition, a Thracian element engrafted upon the Pelasgian. Celtic, Latin, and German dialects were introduced later into the Alps. The possession of a common language, or, at least, of languages with Ibero-African numerals, and probably even more, in common, would have tended to facilitate that commercial intercourse which M. Desor, in his recent delineation of pre-historic Swiss life, *le bel âge du bronze lacustre en Suisse,* has inferred, upon solid grounds, to have anciently subsisted between Switzerland and Etruria. Of especial interest and importance, in reference to the present division of our subject, are his eleventh and twelfth chapters. Nor will those who may agree with myself in connecting both elements of the Etruscan population, the Pelasgian and the Tyrrhenian, with the Caucasus and with Armenia, be unprepared for the solution of the following questions propounded by M. Desor:—

[1] *Handbook of Architecture*, vol. i, p. 286.
[2] *Monumenti Inediti*, p. iii.

"Ici se pose une autre question. Les anciens Etrusques de la Haute-Italie, que nous considérons comme les fournisseurs de nos peuplades lacustres, sont-ils les inventeurs de l'industrie du bronze, ou bien ont-ils emprunté cet art à d'autres nations? C'est là un problême du plus haut intérêt, mais que nous n'avons pas mission de résoudre dans cet ouvrage. Sans doute, il est probable que l'industrie métallique a existé *au pied du Caucase avant d'être connue en Italie et en Grèce;* elle y est probablement même plus ancienne que le commerce phénicien" (p. 17).

"Un jour viendra, et il n'est peut-être pas très éloigné, où l'on procédera à une étude comparative non moins détaillée entre le mobilier du bel âge du bronze sur les deux versants des Alpes, soit entre l'Helvétie et l'ancienne Etrurie. Après cela, il y aura lieu de rechercher jusqu' à quel point il existe une concordance entre la culture du bel âge du bronze et celle qui se trahit par le résultat des fouilles entreprises sur l'emplacement de *l'ancienne Troie;* en d'autres termes, entre la civilisation dite *pélasgique* et celle que nous attribuons *aux anciens Etrusques et aux populations lacustres*" (p. 27).[1]

[1] There is some approach to an African character in the description which M. Desor gives (chap. 18) of two lacustrine skulls, one belonging to the bronze age (Mörigen), and one to the iron age (La Tène) :—

"Ce sont bien là, on le voit, les dimensions ordinaires que MM. Rütimeyer et His attribuent à leur type de Sion; c'est le crâne mésaticéphale qui se retrouve également dans les tombeaux du Midi de l'Allemagne (Hügelgräber). *Les os de la face sont très développés. La mâchoire est légèrement prognathe et les alvéoles sensiblement obliques.* Les orbites sont grandes et carrées. Le trou occipital est sensiblement ovale; sa distance du bord postérieur de l'occiput n'est que de 35 millimètres. Enfin, nous avons aussi pu, grâce à l'état de conservation de notre crâne de Mörigen, mesurer sa capacité, que nous avons trouvé être de 1470 centimètres cubes, par conséquent, un peu inférieure à la capacité moyenne des crânes étrusques qui, d'après M. Montegazza, est de 1490 centimètres, et sensiblement plus faible que celle des Romains, qui, d'après le même anthropologiste, est de 1524."

"Entre les deux crânes de Mörigen et de la Tène, la différence n'est

Mr. Fergusson notices "the remarkable similarity in style that exists between (some) Peruvian buildings and the Pelasgic remains of Italy", but regards it at the same time as "only accidental". Lopez, however, lays much more stress on this and other coincidences: yet, were it not for philological evidence, we should hardly feel assured of a primeval affinity uniting the Peruvians and other Americans, through the South Eastern Turanians, to the Pelasgians and the rest of the Iberians; an affinity of which the most ancient evidence is supplied by the bilingual monuments of Assyria and Lycia. The analogies in language, thus made apparent, are certainly accompanied by some remarkable analogies in national customs; as, for instance, that of the *couvade* (*ante*, p. 76), which exists among the South Americans as well as among the Basques, as it did among the Tibareni; or that practice of burying in earthen jars, still employed in Brazil, and anciently in Assyria, Corsica, and the Balearic Isles, which is dwelt upon by Mr. Marryat in his *History of Pottery and Porcelain*, p. 370 (ed. 2). The same author says likewise (p. 397):—"The pottery of Peru, Chili, and Columbia, has a peculiar character which distinguishes it from any European, and approximates it to the Mexican. . . . Though this pottery is generally very uncouth in form and ornament, yet in some specimens the patterns, carved or indented, represent those

certainement pas plus grande qu'elle ne l'est de nos jours entre deux individus de la même race. Cependant, s'il fallait distinguer entre les deux, nous ferions remarquer qu'il y a tendance au progrès dans le crâne de la Tène (iron), en ce qu'il s'éloigne un peu plus de la *dolichocéphalie*, puisque son index céphalique est de 81.2, tandis que celui du crâne de Mörigen (bronze) est de 77.0; . . ."

"Il y a loin, cependant, de ces différences à celles qui existent entre les diverses races qui sont aujourd'hui admises . . . Nous n'éprouvons dès lors aucune hésitation à rapporter le crâne de la Tène (iron), aussi bien que celui de Mörigen (bronze), à l'ancienne race qui a occupé notre sol dès l'époque de la pierre polie."

well known as the 'Vitruvian scroll' and 'Grecian fret'. It is curious that a people so apparently rude should have chosen ornaments similar to those adopted in the earliest Grecian age, and found on the Lantern of Demosthenes at Athens 336 B.C., but which, however, it appears the Greeks themselves borrowed from the Assyrians. The 'honeysuckle pattern' is found upon the earliest known monuments of Buddhist art, and the Etruscan, so called, upon the earliest Chinese bronzes." Some further analogies between America and Eastern Asia have been mentioned above, pp. 45-47. As the New World had so much in language that was once common also to Southern Europe and Southern Asia, the community may very well have extended to other things besides language.

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